ELECTRONIC GOVERNANCE AND SERVICE DELIVERY: A CASE STUDY OF AIZAWL DISTRICT, MIZORAM

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ELECTRONIC GOVERNANCE AND SERVICE DELIVERY: A CASE STUDY OF AIZAWL DISTRICT, MIZORAM

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This thesis is an original work of her research which has not been used previously and which has not been submitted to any other University for any purpose.

She is duly permitted to submit her thesis for examination.

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DECLARATION

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I, S.Lalthanzuali, hereby declare that the subject matter of this thesis is the record of work done by me, that the contents of this thesis did not form basis of the award of any previous degree to me or to the best of my knowledge to anybody else, and that the thesis has not been submitted by me for any research degree in any other University/Institute.

This is being submitted to the Mizoram University for the degree of Doctor of Philosophy in Public Administration.

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ABBREVIATIONS

IT	Information Technology
NPA	New Public Administration
ICT	Information and Communication Technology
E – Governance	Electronic Governance
NPM	New Public Management
UNDP	United Nations Development Programme
E – Government	Electronic Government
SMART	Smart, Morale, Accountable, Responsive and Transparent
PPA	Public Policy Administration
NEP	New Economic Policy
NPS	New Public Service
NICNET	National Informatics Centre Network
NeGP	National e – Governance Plan
DIT	Department of Information Technology
DAR & PG	Department of Administrative Reforms & Public Grievances
MMPs	Mission Mode Projects
PDS	Public Distribution System
MeitY	Ministry of Electronics & Information Technology
G2C	Government to Citizen
G2E	Government to Employees
G2B	Government to Business
G2G	Government to Government

C2G	Citizen to Government
MSEGS	Mizoram State e – Governance Society
DICT	Department of Information and Communication Technology
CSC	Common Service Centre
PPP	Public Private Partnership
SCM	Smart Cities Mission
GoI	Government of India
DeitY	Department of Electronics and Information Communication Technology
R & D	Research & Development
NIC	National Informatics Centre
CIO	Chief Information Officer
CSI	Computer Society of India
VAT	Value Added Tax
OSWAN	Odisha State Wide Area Network
SeMT	State e – governance Mission Team
MSWAN	Mizoram State Wide Area Network
SDC	StateData Centre
SSDG	State Service Delivery Gateway
SP	State Portal
CCTNS	Crime & Criminal Tracking Network & System
ULB	Urban Local Body
RLB	Rural Local Body

INC	Indian National Congress
MNF	Mizo National Front
PIO	Principal Informatics Officer
RTI	Right to Information
VLE	Village Level Entrepreneurs
BRI	Broadband Readiness Index
USOF	Universal Service Obligation Fund
CTDP	Comprehensive Telecom Development Projects
MER	Monthly Expenditure Report
MPSC	Mizoram Public Service Commission
CMS	Content Management System
GAD	General Administration Department
RTPS	Right to Public Services
EODB	Ease of Doing Business
RIKs	Rural Information Kiosks
GoM	Government of Mizoram
CAF	Common Application Form
ILP	Inner Line Pass
RTPS	Right to Public Service Portal
SSDG	State Service Delivery Gateway & State Portal
SOA	Service Oriented Architecture

UG	Underground
DIPR	Department of Information & Public Relations
FCS & CA	Food, Civil Supplies & Consumer Affairs Department
DP&AR	Department of Personnel & Administrative Reforms
UD&PA	Urban Development & Poverty Alleviation Department
SHP	Small Hydro Power
RDSS	Revamped Distribution Sector Scheme
R – APDRP	Re – structured Accelerated Power Development and Reforms Programme
RGGVY	Rajiv Gandhi Grameen Vidyutikaran Yojana
eDAR	electronic Detailed Accident Report
IRAD	Integrated Road Accident Database
DTO	Directorate of Transport Office
MVI	Motor Vehicle Inspector
LAMS	Leave Application Management System
QPR	Quarterly Progress Report
MPLAN	Mizoram Planning
MSUM	Mizoram Startup Mission
PMAY	Pradhan Mantri Awas Yojana
DAY – NULM	Deendayal Antyodaya – National Urban Livelihoods Mission
AMRUT	Atal Mission for Rejuvenation and Urban Transformation

SFAS	Sustainable Food & Agriculture Service
AoB	Allocation of Business
RCMS	Ration Card Management System
AePDS	Aadhar Enabled Public Distribution System
PFMS	Public Financial Management System
MIS	Mizoram Information Service
IFMIS	Integrated Financial Management Information Systems
GeM	Government e – Marketplace
PAR	Performance Appraisal Report
PHED	Public Health Engineering Department
P&E	Power & Electricity
Gpay	Google Pay
CIO	Chief Informatics Officer
AIO	Assistant Informatics Officer
AMC	Aizawl Municipal Corporation

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CHAPTER – I

INTRODUCTION

1.1.Information Technology (IT) and Governance

In the governance process, the objectives of the government have consistently been to foster development and implement changes for societal improvement by establishing legitimacy and the rule of law. Nowadays, the Government prioritized managing and improving the quality of life by utilizing the advanced technology and tools in the governance process. In addition to putting policies into action, the government is also becoming increasingly concerned with how best to provide services to the populace in a simple and effective way. The adage "time is money" is incredibly true in today's world, where everyone has their own responsibilities and time is quite expensive. As a result, everyone tries to maximize their time using the technology that is accessible.

The services that the government offers and the manner in which those services are given to its people serve as the basis for measuring its performance. Furthermore, we may say that the public wants their services to be provided in the most effective and convenient manner possible. The public service quality is another significant aspect that has consistently been linked to responsive governance. It was apparent that the governance process needed improvements and the most significant step that could be made in this direction is creating a transparent government by holding bureaucrats accountable to the public and to their jobs[1].

The traditional approach to public administration prioritised efficiency and economy over effectiveness and service efficiency, principles and procedures over values and philosophy, and administration over the public[2]. The need for reforms in the governance system was felt and the New Public Administration (NPA) which had evolved during the late 1960's and early 1970's places more emphasis on addressing

[1] Denhardt, J. V., & Denhardt, R. B. (2015). *The new public service: Serving, not steering* (4th ed.). M.E. Sharpe.
[2] O'Leary, R., & Van Slyke, D. M. (Eds.). (2018). *The future of public administration around the world: Theories, methods, and practices*. Routledge.

social issues, which results in a more responsible government that cares more about its citizens and is more intelligent, transparent, and effective. The objective of NPA is to integrate the principles of traditional public administration into the contemporary administrative framework, enhancing its citizen-centric approach. This has prompted the government to utilise an increased array of Information and Communication Technology (ICT) tools in the governance process, particularly in service delivery. Therefore, the necessity of integrating contemporary technology into administrative processes has highlighted the significant role that electronic governance (e – governance) plays in establishing an effective, transparent, and technologically advanced administration. Technology here implies IT enabled technology which aims at providing efficient services from an organisation to the people or within the organisation itself. ITES, which stands for Information Technology Enabled Services, is a popular location for major corporations to outsource their work because of its cost-effectiveness and skilled labor.[3] The developed nations may demand greater costs for services that are comparable to those offered by ITES. Additionally, India and the Philippines are places that are frequently visited.

As a result of the shortcomings of the NPA which had emerged in the late 1980s, New Public Management (NPM) seeks to make the public sector more a business-like system, so improving efficiency and effectiveness of that sector. The focus of the NPM which had aligned with the goal of e – governance achieving efficient government by improving its method of service delivery, making the government more citizen – centric and decentralisation of autonomy. Moreover, the NPM aims at improving the public sector by promoting the adoption of various innovation and technology which again could be fulfilled through the use of the various e – governance technology to achieved its ends.

By fusing NPM's focus on performance and efficiency with NPA's values of equity and participation, e-Governance creates an efficient and inclusive governance framework. With e-Government, which seeks to provide public services more

[3] Javat Point (n.d) ITES: Information Technology Enabled Services. https://www.javatpoint.com/ites-full-form

successfully and transparently, NPA's emphasis on responsiveness and NPM's focus on efficiency are addressed. By highlighting the necessity of enhancing public sector capability, both NPA and NPM have an impact on e-Government. Effectively implementing and maintaining e-Government initiatives requires training and skill development in digital technologies[4].

NPA's emphasis on public values and NPM's strategic management approach have aided in the development of e-Government by producing a complete framework that takes into account both citizen involvement and operational efficiency. NPA's aim of making a responsive, accountable government and bringing efficiency in the governance system as a whole could be achieved with the help of employing various ICT tools.

1.2.Governance and Good Governance

The World Bank (1993) defines Governance as "the traditions and institutions by which authority in a country is exercised for the common good. This includes (i) the process by which those in authority are selected, monitored and replaced, (ii) the capacity of the government to effectively manage its resources and implement sound policies, and (iii) the respect of citizens and the state for the institutions that govern economic and social interactions among them.[5]" The United Nations Development Program (UNDP) describe governance as the use of administrative, financial, and political authority to manage national affairs at all levels. It is a neutral idea composed of the complex structures, processes, connections, and organisations that allow individuals and organisations to voice their concerns, carry out their duties and rights, and settle disputes.[6]

The concept of Good Governance came into being since the beginning of 1990s, which aims at strengthening the government functioning in order to bring about an effective,

[4] Heeks, R. (2006). *Implementing and managing eGovernment: An international text*. Sage Publications.
[5] Raj, B.S. (2008). *E -governance Techniques: Indian and Global Experiences*. New Century Publications. 3.
[6] Ibid.3.

efficient and citizen-friendly system of governance. The World Bank (1992) opines, "Good Governance is epitomized by predictable, open and enlightened policy – making, a bureaucracy imbued with professional ethos acting in furtherance of the public good, the rule of law, transparent processes, and a strong civil society participating in public affairs. Poor governance (on the other hand) is characterized by arbitrary policy making, unaccountable bureaucracies, unenforced or unjust legal systems, the abuse of executive power, a civil society unengaged in public life, and widespread corruption.[7]" Vivek Chopra characterises Good Governance as the clear identification of society's fundamental values and the pursuit of these values[8]. The system of good governance aims at bringing about transformation in the functioning of the government by making them responsive to the needs of the citizen and ensuring a larger scope for people's participation in governance for the development of one's own nation. The essential components of good governance, including participation, accountability, transparency, rule of law, responsiveness, effectiveness, and efficiency, involve the use of ICT in government operations.[9]. The utilisation of ICT tools in the functioning of the Government is known as e-Governance and is consider being one of the most efficient tools to promote good governance.

1.3.E – Governance and Electronic Government (E – Government)

The UNESCO (2002) defines e – governance as, "E-governance is the public sector's use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective. E-governance involves new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organizing and delivering information and services. E-governance is generally considered as a wider concept than e-government, since it can bring about a change in the way citizens relate to governments and to each other. E-

[7] Ibid.4.
[8] Mukhopadhyay, A. (2000). *IT and Administration Culture in India.* IJPA. 296.
[9] Sharma, M.P., Sadana, B.L., & Kaur, H. (2012). *Public Administration in Theory and Practice.* Kitab Mahal. p.69-70.

governance can bring forth new concepts of citizenship, both in terms of citizen needs and responsibilities. Its objective is to engage, enable and empower the citizen.[10]"

World Bank (2009) defines e-government as, "The use by government agencies of information technologies (such as Wide Area Networks, the Internet and mobile computing) that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency, greater convenience, revenue growth, and/or cost reductions."[11]

The term 'e – government' and 'e – governance' has often been used interchangeably but it does have different connotation. 'E – Government' is mainly concern with the ICT tools being used in the institution for serving their client i.e., the citizens. It aims at bringing transformation in the way the Government has served its citizens. While the term 'E – Governance' main concern is to widen citizens participation in its functioning and the inclusion of the citizens in the decision – making process.

E-Governance refers to the utilisation of Information and Communication Technology (ICT) in governmental operations to achieve Simple, Moral, Accountable, Responsive, and Transparent (SMART) governance[12]. 'Simple' involves simplifying the government procedures in maintaining the laws and regulations which is design in such a manner that it serves conveniences to the citizen. Otherwise, the complexity and multiplicity of the laws together with the complicated procedures in order to attain their requirements were likely to cause delays in obtaining the services. The application of ICT in the government makes it easier to resolve their issues and the system becomes more of a citizen – centric which is in turn one way of utilising the democratic freedom. 'Moral' involves reforms in the ethical values of the political and

[10] https://www.unesco.org
[11] https://www.worldbank.org/en/topic/digitaldevelopment/brief/e-government)
[12] Fadia, B.L., & Fadia, K. (2020). *Public Administration: Administrative theories*. Sahitya Bhawan. p.245.

administrative machinery. The reforms include systematic changes in creating political and social awareness among the masses, electoral reforms, downsizing of the government, enhancing the literacy level, decriminalization of politics and flattening of government departments. 'Accountability' makes a clarification in identifying the responsibility of the officials and for whom they are accountable. 'Responsiveness' in this context means to highly active in presenting and responding to the needs of the public. In this context, emphasis is laid on the quality and amount of time dedicated for it to be completed in the fastest means. 'Transparency' means the citizens right to get the most recent information from the government through a proper channel in order to satisfy their needs.

1.4.Mizoram Right to Public Services Act, 2015

The basic concept of the Right to Public Services (RTPS) is that citizens must receive timely, efficient, and transparent services from the government. The Mizoram Right to Public Services Act, 2015 (hereinafter the RTPS Act) is a significant legislative measure aimed at ensuring the prompt provision of public services in Mizoram, prioritising transparency and accountability.

In numerous regions, citizens frequently express their dissatisfaction with the delay or denial of services that are legally theirs. The RTPS Act, 2015, was introduced to address this situation by establishing mechanisms for addressing grievances when essential public services are delayed or denied and imposing time-bound obligations on government officials to deliver them. The Act also represents a significant advancement in the promotion of good governance by minimising corruption and inefficiencies within government services. Citizens can hold public officials accountable for failing to provide services within the designated time frames by enforcing accountability.

Like many other Indian states, Mizoram has long battled with bureaucratic inefficiencies in public service delivery. For the people, these inefficiencies have historically caused annoyance that has resulted in corruption, lack of responsibility, and needless suffering. Citizens must exercise their rights by means of public services including birth and death certificates, ration cards, driving licenses, and permits; hence, the delay or denial of these services compromises their capacity to fully engage

in society. Inspired by similar laws in other Indian states including Madhya Pradesh, Delhi, and Rajasthan, the Mizoram government responded to these difficulties by introducing the RTPS Act in 2015. The RTPS Act seeks to guarantee the protection of citizens' rights to essential public services and to hold government officials accountable for any delays in service provision.

The Mizoram Right to Public Services Act, 2015 aims to accomplish several primary objectives. The principal aim of the Act is to guarantee that public services are provided to citizens within a designated timeframe. This aims to minimise delays in administrative procedures, allowing citizens to obtain essential services without unwarranted obstacles.

The RTPS Act requires public authorities to disclose the list of services offered to the public, including their corresponding timeframes. This transparency aims to empower citizens by informing them of their rights and the obligations of public officials. The Act establishes a framework enabling citizens to file complaints when services are not rendered within the stipulated timeframe. This facilitates the resolution of grievances and guarantees that citizens can pursue redress for any service delivery concerns. A distinctive feature of the RTPS Act is its accountability mechanism for public officials, imposing penalties for failure to provide services within the designated timeframe. This seeks to deter corruption and procrastination.

The Act fosters good governance by institutionalising accountability and transparency. This entails a framework in which public officials function not merely as service providers, but as public servants who address the needs of citizens with integrity and efficiency.

The Mizoram Right to Public Services Act, 2015 represents a crucial advancement in promoting effective governance and citizen-focused service provision; however, its execution has encountered several obstacles. The challenges encompass:

1. Insufficient Awareness Among Citizens

A major impediment to the successful execution of the RTPS Act is the inadequate awareness among citizens concerning their rights and the Act's provisions. Numerous residents in rural regions may lack comprehensive knowledge regarding the services to which they are entitled or the timelines for their delivery. Initiatives to inform and enhance awareness regarding the Act are essential for its efficacy.

2. Limitations in Government Department Capacities

Numerous government departments in Mizoram, especially at the grassroots level, encounter capacity limitations, including inadequate personnel, insufficient training, and obsolete infrastructure. This may result in delays in service delivery, despite officials' commitment to achieving the time-sensitive objectives established by the Act. The government must invest in enhancing administrative capacity to improve the efficacy of the RTPS Act.

3. Opposition to Transformation

Government officials and employees may oppose the modifications introduced by the RTPS Act, especially those habituated to a culture of procrastination and ineffectiveness. Altering ingrained attitudes and work practices can be a protracted endeavour, and without adequate support from higher authorities, the Act's objectives may remain unfulfilled.

4. Oversight and Compliance Challenges

The Act's efficacy relies on stringent oversight and enforcement of the stipulated timelines and penalties. In practice, guaranteeing compliance with the Act by all public officials can be difficult, especially in remote or underserved regions. Robust monitoring systems and the political resolve to impose sanctions are crucial for the Act's efficacy.

The Mizoram Right to Public Services Act, 2015 is a crucial legislative measure aimed at enhancing the efficiency, accountability, and transparency of public service delivery in the state. The Act guarantees timely access to essential public services by establishing explicit time frames for service delivery, implementing grievance redressal mechanisms, and imposing penalties for non-compliance. Despite ongoing challenges in its implementation, the Act has achieved considerable progress in minimising delays, augmenting citizen engagement, and fostering good governance. Through sustained initiatives to enhance awareness, bolster administrative capabilities, and oversee compliance, the RTPS Act can serve as a pivotal instrument for advancing public service delivery and governance in Mizoram.

1.5.IT Revolution

The field of public administration has seen considerable evolution over time, transitioning from the term "administration" to "management." Consequently, there has been a rise in engagement with the private sector, which has brought about the introduction of ideas such as "managerialism" and "value for money" in the public arena. This transition has diverted attention from the conventional emphasis on public organizations and their activities, leading to the notion of "the depletion of public administration" as a resurgence of the field.

From 1948 onwards, the State has been regarded as the primary means for achieving socioeconomic advancement, with administration serving as the core instrument for executing development goals and programs[13]. Nevertheless, deficiencies in the structure and management of the government posed substantial obstacles to attaining national goals. Emerging nations, especially during the 1950s, aimed to achieve independence from imperialism and saw the State as a means to advance political and economic self-governance. The proliferation of public administration infrastructure and staff was anticipated to expedite the growth of employment opportunities, nevertheless, dismal results were frequently ascribed to insufficient organizational provisions. In response to these concerns, measures such as the reorganisation of administration, implementation of training programmes, establishment of monitoring systems, and evaluation of programmes were adopted. The NPM initiative sought to supplant the conventional concepts of Public Policy Administration (PPA), prioritizing accountability based on outcomes rather than procedural responsibilities.

During the 1960s, as a result of the information technology revolution that took place, one of the policies that the government has implemented is to encourage the development of both the software and hardware manufacturing sector to improve the standards of services provided to citizens. As a result of the New Economic Policy (NEP) being implemented in 1991 and the incorporation of ICT into the operations of the government, the New Policy Model (NPM) was regarded as the means by which

[13] Ferdous, J. (2016). The Journey of New Public Management: An Analysis. *International Journal of Business, Economics and Law*. *11*(2)

the government could be reinvented. This decision was made as a consequence of the NPM.

In this context, new ICT, especially the internet, has emerged as a strategically advantageous tool for designing public services from the citizens' perspective and delivering them electronically. NPM focuses more on achieving efficiency and performance, while governance emphasise interaction amongst government, market forces, civil society, organisation and cooperative endeavours in realising the desired outcome[14]. NPM seeks efficiency, economy, effectiveness, accountability, people's participation, de – bureaucratisation through increased entrepreneurship in society and public private partnership.[15]

As a result, the New Public Service (NPS) approach came into existence, which placed a greater emphasis on the provision of services rather than the exercise of control or the steering of society in new directions; the principal duty of public servants is to aid citizens in expressing and realising their shared interests[16]. Developing an understanding of the public interest that is shared by all public administrators must be their top priority. Finding fast fixes based on personal preferences is not the aim. Instead, it involves establishing shared responsibilities and interests. The most efficient and ethical ways to develop policies and programs that address public needs are through teamwork and cooperative methods.

Rather than being the result of the accumulation of individual one's own interests the public interest is the result of a discourse on collective ideals for the public. Therefore, public employees should prioritise cultivating partnerships and collaborative initiatives with the general public, rather than merely addressing the needs of their "customers." In addition to the market, public employees have other responsibilities,

[14] Sahni, P., Vayunandan, E. (2012). *Administrative Theory.* PHI Learning Private Limited. 96.
[15] Sahni, P., Vayunandan, E. (2012). *Administrative Theory*. PHI Learning Private Limited. 86.
[16] Denhardt, R. & Denhardt, J. (2003). The New Public Service: An Approach to Reform. *International Review of Public Administration*. 8. 3-10.
Doi: 10.1080/12294659.2003.10805013.

including following statutory and constitutional legislation, political norms, community values, professional standards, and the interests of the public.

1.6.Evolution of e – governance in India

The National Informatics Centre Network (NICNET), initiated in 1987, facilitated the advent of e-governance. Centre for E-Governance was established by the Ministry of Information and Communication Technology on August 15, 2000, to implement awareness programs for decision-makers at both the central and state levels, as well as for technical isolation. The National e-Governance Plan (NeGP) was established by the Department of Information Technology (DIT) in conjunction with the Department of Administrative Reforms and Public Grievances (DAR&PG) on May 18, 2006.[17] It aimed at promoting e-governance on a large scale in a citizen-centric manner. It consists of seven 27 Mission Mode Projects (MMPs) and 8 components which were to be implemented at the Central, State and local levels. In the year 2011, the Mission Mode Projects was raised to 31 by adding Health, Education, Posts and Public Distribution System (PDS) in it[18].

The e-governance initiative emerged as a division under the Ministry of Electronics and Information Technology (MeitY), tasked with establishing standards and policy guidelines, offering technical assistance, and further advancing the Digital India vision. Their aim is to make all the collection and payments through electronic mode in the entire government department. In order to make easy transactions, accessibility and competitive transaction charges, MeitY envisions the establishment of multiple payment channels. In the 1980's, RBI plays the pioneering role in automating the paperless system of work and with this came the evolution of e-payment in India.

[17] http://www.indusedu.org/pdfs/IJREISS/IJREISS_1560_76688.pdf
[18] https://www.meity.gov.in/divisions/national-e-governance-plan

1.5.1. Types of e – governance

E-governance facilitates interaction between various stakeholders i.e., Government to Citizen (G2C), Government to Employees (G2E), Government to Business (G2B) and Government to Government (G2G).

1. Government to Citizen (G2C)

G2C refers to the interaction that takes place between the government and its citizens in order to facilitate the transaction and exchange of information. This includes the payment of taxes, the application for certificates, the renewal of licenses, and other similar activities. Within the realm of e-government, this is widely regarded as the most important goal.

There is a responsibility on the part of the government to interact with the people through a system that is both open and accountable. The government is tasked with the responsibility of enhancing social opportunities and public services in the following areas:

i. Transportation (including the registration of motor vehicles, the issuance of driving licenses, the granting of plying permissions, the collection of taxes and fees through cash and bank challans, and the control of pollution);
ii. Healthcare (including the connection of various hospitals across the country in order to improve medical services for citizens);
iii. Education - Through the use of an electronic governance platform
iv. It also makes it possible to provide services such as the issuance of certificates, job cards, passports, ration cards, bill payments, and tax filings from the comfort of one's own home.

The provision of G2C services has as its primary goals the assurance of the dissemination of information in a fair and equitable manner for all individuals, the facilitation of the acceptance of citizen feedback, and the improvement of welfare services.

2. Government to Employees (G2E)

The Government to Employees (G2E) is an additional method of service delivery that is utilised between the two parties. By utilising this method of service delivery, an effort is made to fulfil the requirements and fulfil the satisfaction of the staff members. Additionally, it assists in augmenting efficiency and effectiveness, as well as assisting in the prevention of delays. When we talk about the G2E model, we are referring to the transfer of information and services from the government to employees, as well as from employees to the government. The training is conducted through the use of e-learning techniques. Consolidating the workforce and facilitating the exchange of information among workers are two of the goals.

Additionally, it has made it easier for employees to access information regarding their pay and benefit policies, as well as to manage their profits through the use of information technology.

3. Government to Business (G2B)

G2B facilitates efficient interaction between the government and the business sector, promoting transparency and reducing bureaucratic obstacles. This process saves time, allows for the sale of surplus government items, and streamlines procurement requirements. This interaction employs e-Governance tools to enable efficient communication between business entities supplying goods and services and the government. G2B can produce significant efficiencies for governmental entities and enterprises alike. A wide range of services, including the distribution of policies, memoranda, rules, and regulations, are included in the G2B exchange between government entities and the business sector. The services that are offered to businesses include, among other things, the acquisition of recently updated business information, the access to newly enacted regulations, the downloading of application forms, the filing of taxes, the renewal of licenses, the registration of businesses, and the acquisition of permits. The removal of bureaucratic barriers, the saving of time, the reduction of operational costs, and the promotion of a more transparent business environment in government dealings are the primary goals of this interaction.

4. Government to Government (G2G)

G2G entails the sharing and exchange of information exclusively within and among governmental entities. Governmental actors may encompass those at the central, state, and local levels. G2G has focused on cost reduction, performance management, strategic government connections, and the efficient enhancement of governmental processes.

Utilising IT tools such as live fingerprint scanning and verification, along with electronic entry of reports and documentation, enhances the efficiency and effectiveness of government institutions. The primary components of this e-governance framework include the E-Secretariat, which interlinks valuable governmental information across various departments; E-Police, encompassing police personnel and criminal records; E-Court, which establishes a comprehensive database of past, pending, and ongoing cases; and Statewide Networks (Kumar: 2011).

1.5.2. Objectives of E – Governance

The objectives of e governance are as follows[19]-

1. E-governance aims to make government information available to the public for the benefit of all.
2. The goal is to create a collaborative framework between the government and citizens, allowing citizens to provide advice and inform the government about their concerns.
3. Encourage public participation in governance processes.
4. E-Governance improves information technology and electronic media to strengthen the economy by aligning governments, citizens, and enterprises with modern advances.
5. The primary goal is to promote transparency and accountability in the governance process.
6. To reduce government spending on information and services.

[19] Reddick, C. G. (2010). *Comparing e-government and e-governance: A case study approach*. Routledge. p.28

1.5.3. Models of e – governance

The use of a model offers the additional advantage of enabling the prediction and simplification of complex systems, therefore conferring a notable gain. When one is attempting to conceptualize or comprehend something that is challenging to perceive or understand, models can provide significant support. So, keeping in mind the importance of models, we shall study the following models so as to have a better understanding of the very purpose of e – governance.

Gartner Model of e – governance:

The four stages of e – governance model as proposed by Gartner are as follows:[20]

1. Presence: The initial phase of e-governance is defined by the availability of information on the various government platforms, including websites and e-brochures. Information development, establishment, and delivery for stakeholder usage are the activities involved in the first stage. Although it is the easiest and least expensive stage of e-governance adoption, the stakeholders have limited options at this point. For instance, the Ministry of Home Affairs website only offers a brief description of the ministry and officer profiles, contact information, and address for correspondence. It does not, however, allow for interactive features and only allows information to flow in one direction.
2. Interaction: The second phase of the e-governance model is a more developed version of the first, entailing interactions between the government and interested parties, interested parties, and citizens. The actual means of communication are involved in a two-way exchange of information. At this point, stakeholders or individuals can get in touch with the government via online forms, chat databases, customer support platforms, email, or feedback forms. It guarantees government offices' accountability and communication

[20] M, Sumathy. (2021). *A hand book of e-governance in India*. New Delhi: Abhijeet Publications. 60 – 63.

transparency. Additionally, it lessens the amount of time that stakeholders and governance interact in person, saving labor hours.

3. Transaction: Transactions between stakeholders and the government comprise the third level of e-governance. Currently, the government's e-governance initiatives enhance the quality of life for citizens by simplifying administrative procedures and facilitating electronic transactions. The government, businesses, and departments have the ability to make online payments for a variety of services, such as online tax payments, bid amount deposits, licence renewals, and other services.This stage involves more activities in the information flow than the second, mostly one-way interactions between the government and its clients. The intensity of interaction is also higher in this stage.
4. Transformation: At this level, information is received, organized, analyzed, and executed while making the most complete use of all available technology to revolutionize government services. This is a two-way information flow intended to strengthen the bonds between stakeholders and the government, and the service provider needs to be well-equipped to deal with stakeholder concerns and challenges. The primary advantage of this stage is the efficient exchange of information by the service provider and the collaborative decision-making process between private interest groups, the union, and local, state, and federal governments. Red tape behaviour is reduced and organisational barriers are dismantled by mandating that government employees adhere to time-bound decision-making.

Layne & Lee Model of e – Governance

According to Layne and Lee, e-governance is a natural process that should be initiated and carried out in a methodical manner, since it is an evolutionary phenomenon. In accordance with their model, the first stage is cataloguing, which is the time when governments will make information available online. In the second stage of e-governance projects, the government moves between the transaction stage and the governance stage. The way in which governments interact with their citizens will be

altered as a result of the introduction of e-Governance tools, which will begin to revolutionise governments. E-governance projects will transition from the simple automation and digitisation of the existing process to the transformation of government services, according to the third stage of the "Vertical integration" theory, which theorists proposed. Horizontal integration is the final stage of the Layne and Lee model. This stage involves the horizontal integration of services across a variety of government functions through the utilisation of information technology tools.

United Nations E-Readiness Survey considers that e – governance emerges through the following stages[21]:

i. Emerging presence – Specifically, it takes into account the availability of restricted and fundamental data on the internet. One of the most important aspects of the online presence of the government is the official website, as well as some of the web pages, as well as connections to the various services and departments of the central government.
ii. Enhanced presence – The government gives more open data assets which might be available for download and permits the clients to seek the data inside the records available on the web. However, inadequacy is found for accessing the site.
iii. Interactive Presence – During this stage, the accessibility of online administrations of the government is made possible in order to improve the convenience of the customer. The incorporation of downloadable forms and applications for the payment of bills, duties, and the re-establishment of licenses will be included in this. Websites run by the government would be equipped with audio and video capabilities in order to enhance the level of user-friendliness with the citizens at this stage. Communication with the administrative authorities could be accomplished through the use of e-mail, fax, telephone, and regular mail. The information on the website would be

[21] Palvia, S.C.J., & Sharma, S.S. (2007) E – Government and E – Governance. *International Conference on E – Governance.* 1 – 12.

updated on a regular basis in order to ensure that it is up to date and relevant for the general public.

iv. Transactional process – It makes it possible for the government and the citizens to communicate with each other in two different ways. When this stage is reached, the residents will have the ability to pay for significant open administrations.

v. Networked Presence – It is possible to characterise it as a combination of citizen-to-government (C2G), citizen-to-government (G2G), and citizen-to-government (G2C). It is eager and ready to include the general public in a two-way open discourse, and it empowers citizen cooperation and basic leadership that is participatory and online. Initiation of the integration of general society area offices with full collaboration and comprehension of the concept of aggregate basic leadership, participatory democracy, and native strengthening as a democratic right takes place during this stage.

E – governance and IT Act 2000

An Information Technology Act, 2000 has been approved by the Government of India in order to facilitate the growth of electronic commerce and electronic communication as a result of the Internet, as well as to accelerate the introduction of information technology in essential areas of the economy. The purpose of this legislation is to establish a legal framework that will facilitate electronic commerce and transactions, as well as to recognise electronic contracts, prevent computer crimes, electronic filing and documentation, digital signatures, and other related topics[22]. The concept of 'Electronic Governance' had been given provision in Chapter III of the Act. The Chapter consisted of seven (7) headings i.e., Section 4 to Section 10 of the Act. [23] These section offers comprehensive elucidations regarding the legal acknowledgement of electronic records, digital signatures, and their application within governmental entities and agencies.

[22] Fadia,B.L., & Fadia, K. (2020). *Public Administration: Administrative Theories*. Sahitya Bhawan. p.248.

[23] Retrieved from Information Technology Act 2000 | Ministry of Electronics and Information Technology, Government of India (meity.gov.in) Retrieved on 04/05/2022

Section 4 provides that any legislation requiring information or other content to be in written, typewritten, or printed format shall be considered fulfilled if such information or content is provided or made accessible in electronic form for future reference.

Section 5 stipulates that any legislation requiring authentication through the signature of an individual shall be considered fulfilled if such authentication is achieved via a digital signature applied in accordance with the regulations established by the Central Government.

Section 6 stipulates that any legislation mandating the submission of any application or document to any office, authority, body, or agency owned or controlled by the relevant Government shall be considered fulfilled if such submission, issuance, granting, receipt, or payment is conducted through an electronic format as prescribed by the relevant Government. The relevant Government may, through regulations, dictate the manner and format for the filing, creation, and issuance of such electronic records, as well as the method of payment for any fees or charges associated with these processes under clause (a).

Section 7 stipulates that if any legislation mandates the retention of documents, records, or information for a specified duration, this requirement is fulfilled if such materials are preserved in electronic form, provided that the information remains accessible for future reference, the electronic record is maintained in its original format or in a format that accurately reflects the initially generated, sent, or received information, and the details necessary for identifying the origin, destination, date, and time of dispatch or receipt of the electronic record are included within it.

Section 9 does not grant any individual the right to compel any Ministry or Department of the Central or State Government, or any authority or entity established by law or funded by the Central or State Government, to accept, issue, create, retain, or preserve documents as electronic records, nor to conduct any monetary transactions in electronic form.

Section 10 authorises the Central Government to formulate regulations pertaining to digital signatures, including the categories of digital signatures, the techniques and

formats for their application, the processes for verifying the identity of the individual applying the digital signature, control measures to maintain the integrity, security, and confidentiality of electronic records or transactions, and any additional issues necessary for granting legal validity to digital signatures.

Evolution of Mizoram State E – Governance Society (MSEGS)

MSEGS was founded in 2005 under the Societies Registration Act, XXI of 1860. The society is a division of the Department of Information and Communication Technology (DICT), with the primary objective of facilitating economic, scientific, technological, social, and cultural development through the utilisation of information technology, computer-communication networks, and informatics[24]. The services being provided by this society includes software development, consultancy services, manpower outsourcing, establishment of data center, internetworking service, capacity building and training. Currently this society is dealing with seventeen (17) projects – state data center, e – bharat, e – district, State Service Delivery Gateway & State Portal, Common Service Center (CSC), District Intranet Connection, Implementation of G-PON technology in Mizoram, Interactive Digital Classroom, Ease of Doing Business, Online Property Return, Right to Public Service Portal, Mizoram Scholarship Portal, Inventory Management System, Inner Line Pass Portal, Content Management System, Thenzawl Golf Resort and Mizoram Tourism.

1.7.E – government and Public Private Partnership (PPP)

In order to successfully implement and utilise this new system, a compatible new approach is required i.e., the so called PPP model. Under the PPP Model, both the sectors i.e., public and private sectors contributed their best effort in order to deliver public services efficiently. It lays emphasis on the quality of services and the values for it in terms of money. In the PPP Model, both the parties work together right from the initial stages until the end. This PPP is indicative for application in e-government as it merges public sector accountability with private sector efficiency. As of today, public sector is still the largest repository of domain and controller of the statutory

[24] https://msegs.mizoram.gov.in/

powers. In the meanwhile, the private sectors are well known for their efficiency in doing work and their capacity to adapt themselves to innovative changes in technologies. The e – government is all about application of ICT technologies and managerial practices in the complex functioning of the government for a certain amount of time. While this is the case in the public sector, if this sector is working with the efficient private sector who could disburse any amount of manpower and resources needed, a fruitful result is likely to be obtain. Nowadays growth and changes in ICT is immense and it is difficult on the part of the government to develop plans in order to implement as soon as innovative changes has been introduced. It is impossible for the public sector to face alone this demand and could only be met through the help of the private sector. The amount of financial and manpower resources required in order to successfully implement the projects is very large and a well – planned collaboration with the abled private sector is the only solution. Therefore, adopting the PPP system will be the one of the best solutions for the well – functioning of the e – government.

1.8.Smart City Mission in India and Mizoram

On June 25, 2015, the Indian government declared the initiation of the Smart Cities Mission (SCM). The objective is to foster inclusive, sustainable communities that provide essential services, a clean and sustainable environment, and an adequate standard of living for their inhabitants. The goal is sustainable and inclusive development in compact regions that can inspire other cities. The objective of the SCM is to function as a prototype for other Smart Cities, both domestically and internationally, promoting the establishment of additional Smart Cities nationwide. The fundamental infrastructural elements of a Smart City will include adequate resources, prioritising sustainability and efficient public services. The Smart City Model aims to enhance infrastructure, governance, and quality of life in urban areas through integrated technological solutions.[25].

[25] https://mohua.gov.in/cms/smart-cities.php#

The focus area includes:

1. Urban Infrastructure: Modernizing the physical infrastructure, including trash disposal, water supply, roadways, and sanitary conditions.
2. Sustainability: Putting into practice resource efficiency, renewable energy, and environmentally solutions.
3. Governance and Services: Using technology, such as e-governance platforms and intelligent traffic management, to improve municipal services and government.
4. Citizen Engagement: Improving public involvement in urban management and planning.

The core infrastructure elements in a Smart City would include:

i. Sufficient water supply;
ii. Reliable electricity supply;
iii. Sanitation, including solid waste management;
iv. Efficient urban mobility and public transportation;
v. Affordable housing, particularly for the impoverished;
vi. Robust IT connectivity and digitalization;
vii. Good governance, particularly e-Government and citizen participation;
viii. Sustainable environment;
ix. Safety and security of citizens, especially women, children, and the elderly; and
x. Health and education.

Under the Smart Cities Mission (SCM), the central government allocates an average of Rs 500 crores for each smart city over a five-year period, with a corresponding contribution of the same amount required from the State Government or the urban local body. The central government has prolonged the implementation period of SCM until June 2023. Mizoram utilised 42.47 percent, while Meghalaya utilised 47.69 percent of the Government of India (GoI) allocation across various projects among the

underperforming states[26]. The report states, out of 1,862 crores for the 10 Smart Cities in North-East Region, 1,428 crores (77 per cent) have been utilized so far. Under the SCM 100 cities of India were selected to "provide and assist with a better core infrastructure, clean and sustainable environment and a decent quality of life to the citizens through the application of 'smart solutions'," states.

Digital India

One of the flagship initiatives of the Central government, Digital India seeks to turn India into a technologically advanced knowledge economy and society. Digital infrastructure as a utility to every citizen infrastructure, governance and services on demand and digital empowerment of citizens comprise three (3) vision areas.

The approach and methodology for Digital India programme included the following:[27]

i. Ministries, Departments, and States will comprehensively utilise the Common and Support ICT Infrastructure established by the Government of India. The Department of Electronics and Information Communication Technology (DeitY) will formulate standards and policy guidelines, provide technical assistance and support, facilitate capacity building, and undertake Research and Development (R&D).

ii. The existing e-governance initiatives will be suitably restructured to align with the principles of Digital India. Improvements in scope, process reengineering, implementation of integrated and interoperable systems, and the adoption of emerging technologies such as cloud and mobile will be undertaken to enhance the provision of government services to citizens.

iii. States would have the discretion to select additional state-specific projects for inclusion that align with their socio-economic requirements.

iv. e-Governance will be enhanced via a centralised initiative to ensure a citizen-centric service orientation, interoperability among diverse e-Governance applications, and optimal utilisation of ICT

[26] https://aizawlsmartcity.mizoram.gov.in/page/mission

[27] Retrieved from Approach and Methodology | Digital India Programme | Ministry of Electronics & Information Technology (MeitY) Government of India

infrastructure/resources, while adopting a decentralised implementation model.

v. Successes will be identified, and their replication will be proactively encouraged with the necessary products and customisation as required.

vi. Public-Private Partnerships should be favoured whenever practicable for the execution of e-governance initiatives, accompanied by sufficient management and strategic oversight.

vii. The implementation of a Unique ID will be advocated to enhance identification, authentication, and the provision of benefits.

viii. The National Informatics Centre (NIC) will be restructured to enhance IT support for all government departments at both the central and state levels.

ix. Chief Information Officer (CIO) positions will be established in a minimum of 10 essential Ministries to expedite the design, development, and implementation of various e-governance projects. CIO roles will be at the Additional Secretary or Joint Secretary level, possessing overarching authority over IT within the respective Ministry.

1.9.E – Readiness: A need for the growth of e – governance

In order to enhance the growth of the e – government, a readiness must be ensured among the government who are introducing the use and the people who are in need of the service. Without the readiness on using the new system, the growth will be retarded and in the meantime the plan for development of the system will be a total failure. Readiness which comprises of a larger interface i.e., G2G, G2B, B2B, B2C and G2C is simply known as e – readiness. While the e – readiness which is limited only to G2G, G2B and B2B is known as 'e – government readiness' and is related to transformation that took place in the government through ICT tools.

The e-governance systems have gained increased used due to the recent pandemic COVID-19. The government had used it as an important means to delivered information to the citizen which is speedier and much appreciated. Students and workers in different sectors have also done their studies and work through the internet. Not only that, reservation for transportation and payment of bills was also done

through the use of this system. It increases the level of awareness on the use and accession of Government services through the electronic mode.

The electronic payment services and the computerization of the office management system have the capacity to improve the functioning of Government in many ways. It could bring transparency in the work, reduce time waste and paper work, improves efficiency and effectiveness of the workers. It could also increase the flow of information, improves the quality of services as it is like a check put on the government functioning by the citizen, reduce the chances of corruption, making the administrative system anti-hierarchical, downsizing of the workforce thereby increasing team performance, making the governmental functioning citizen friendly, etc. In the meantime, it is also believed to push the administrators to be more active in their work and create the need for spreading awareness about the use of ICT tools among the masses in general and the employees themselves in particular.

1.10. STATEMENT OF THE PROBLEM

The system of digitalising the office management is among the first step of using IT in the office management. Although the system had been introduced with the hope of providing conveniences for the people, we do not know whether there are times where it could in turns create a problem for the user due to poor internet connectivity, power supply failure, inadequate infrastructure for accessing the internet, lack of awareness on the use of the system. Therefore, the study will make an attempt to highlight how the use of e-governance system has improved the Government functioning in service delivery i.e., through digitalisation of offices.

Also, the electronic payment (e-payment) system had been introduced by both the Department (i.e., Public Health Engineering and Power & Electricity), Government of Mizoram in 2017 and 2018 respectively. It was introduced in order to provide a matter of convenience for the people in paying their bills. The payment can be made through the "Payment Gateway" & "Internet banking" hosted by each of the Department's designated Banks.[28] The fees could also be paid through the use of BHIM, Google

[28]https://www.powermizoram.gov.in/irj/go/km/docs/internet/MIZORAM/pages/Home.html

Pay, Paytm, Phonpe or through the use of the Department online portals. Due to it being a recent initiative, there is likely a chance that it could have face problems and drawbacks in performing their activities. Hence, the research work will also study how the use of IT in the e-payment system has benefitted the people in reality and also the problems faced by them.

The e – governance system has been deployed to provide services to the citizen by the government in order to bring about efficient, transparent, accountable and cost-effective services. The progress and growth of the e-governance is likely to depend on the participation and use of the services by the people as well. Therefore, the study will make an attempt to evaluate the participation of the citizens in the e-governance system.

1.13. REVIEW OF LITERATURE

D.K.Gupta (2004) in his book, "*E-Administration*" emphasized the relations between ICT and Government as a transformational tool from the traditional system and this technology served as an important tool to deliver services efficiently to the citizens. The transformation brought about by the used of electronic medium like better governance, easy access to information, citizen friendly by enabling them to participate in decision – making and the management of the ICT by various society and institutions had also been highlighted[29].

J.Satyanarayana (2004) in his book, "*e-Government: The science of possible*" is of the opinion that when it comes to principles for e-government, there are six thumb rules which are to be considered. The thumb rules says that the focused should be laid on the 'government' should be the focused and not on the 'e' part, 'citizens' should be the focused and not on the 'computer', the transformation of the process should be focused rather than translation of the process, software should be focused instead of the hardware, pilot plan should be prioritized rather than the rollout, people should be the main concerned and focused and not on the systems alone. The PPP models should be utilized more for e-government plans and the reason for it could differ as per the

[29] Gupta, D.K. (2004). *E-Administration*. Rajat Publications.

regions and government. The PPP models is suggested with the hope of bringing accountability efficiently, the huge size of the e-government and the complexity with the use, great increase in the resources, creating of stakes outside the government periphery to face the challenge and increasing development in the implementation[30].

P.Panneervel (2005) in his book, "*E-Governance: A change management tool*" talked about the transformation that is brought about by the application of "electronic" in the governance system. The Government of Gujarat was the first to use the smart card - based driving license around the world. Its implementation is done through the use of biometric identification system. The e-governance system is adopted in collecting taxes of the motor vehicle which is done in order to increase the state revenue and curb the practice of corruption[31].

Vasu Deva (2005) in his book, "*e-Governance in India – A Reality*" emphasized that the used of IT in delivering the public services brings about the concept of Good Governance into actions whose aim was to bring about a more citizen-friendly and cost effective governance system.The various issues that are involved in this governance system like infrastructure issues, cultural and social issues, security issues, financial issues, administrative issues, hardware and software issues have also been highlighted as the major issues and concerned areas. He also said that the e-governance system acted as a tool for bringing into reality the goals of the two concepts i.e., New Public Management and Good Governance[32].

R.P.Sinha (2006) in his book, "*E-Governance in India: Initiatives and Issues*" highlighted the initiatives step taken by the Central Government like NeGP, CSC establishment, e – procurement, etc and a few selected state governments program like for the adoption and growth of e-governance. It also brought into light the factors that hindered its growth like funding issue, technical issues, lack of awareness and low e -

[30] Satyanarayana, J. (2004) *e-Government: The science of the possible.* PHI Learning Private Limited.
[31] Panneervel, P. (2005). *E-Governance: A change management tool*. Rawat Publications.
[32] Deva, V. (2005). *E-Governance in India- A Reality*. Commonwealth Publishers.

readiness. However, all the data were collected from the Institute of Allied Manpower Research with no further proof on ground reality.[33]

In his 2007 book "E-Governance," V.M. Rao discusses concepts such as publishing, interaction, and transactions, which aim to enhance public access to government information, expand opportunities for citizen participation in decision-making, and render services more user-friendly for citizens. The possible causes for the failure of e – governance includes – failure to plan or planning to fail, misunderstanding of the concept of governance, focusing on the concept of 'e' rather than governance which should be prioritized, unsustainable business model, award driven projects, misinterpretation of the PPP for Public Money for Private Partners.[34]

Vishwas Tripathi (2007) in his book, "E-Governance: Perspective and Challenges" gave the status of e-governance in a global context. The conceptual hurdles in the implementation and the transition of Information Technology in rural development like technological issues, political issues, social issues, management issues, funding issues had also been emphasized upon. The author was of the opinion that if the e-governance models that were introduced were properly implemented it could provide maximum services to the citizens without or less intrusion in the lives of the users[35].

Vishwas Tripathi (2007) in his book, "*E-Governance in India*" talked about the e-governance initiatives that have been carried out in India in general and some selected states in particular. The various issues that had hampered the growth includes technological issues, political issues, social issues, funding and management issues. These issues were regarded as challenges to be addressed in order to enhance the growth of e-governance and improve the effectiveness and efficiency of government services for citizens[36].

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[33] Sinha, R.P. (2006). *E-Governance in India: Initiatives and Issues.* Concept Publishing Company.
[34] Rao,V.M. (2007). *E-Governance*. ABD Publishers.
[35] Tripathi, V. (2007). *E-Governance perspective and challenges*. Anmol Publications Pvt. Ltd.
[36] Tripathi, V. (2007). *E-Governance in India*. Anmol Publications Pvt. Ltd.

Piyush Gupta and R.K. Bagga (2008) highlighted in their book, "Compendium of e-Governance Initiatives in India," the contributions of various authors regarding the concepts and issues surrounding the e-Governance system in India. The book was segmented into four sections that addressed various elements, including the vision, national plan, and methodology employed by the Computer Society of India (CSI) for the Nihilent e-governance awards 2006-2007. It covered Government to Business projects from different states which dealt with e-procurement, Value Added Tax (VAT) and dealer services. The Government to Government/ Employees used of the Information and Communication Technologies in order to provide better services had also been emphasized[37].

N.Gopalsamy (2009) in his book, "*Information Technology and E-Governance"* revealed that e-governance, e-filing, e-banking, e-security, e-commerce, etc involved the use of ICT to perform their functions. Its main concerned was on the use of ICT in business and industry; with a particular reference to IT industry, government policies and programmes, professionals and the public in general. The NeGP, education and awareness on cyber – security, E – Readiness assessment of State/UT's were among the various development programmes and initiatives taken for social transformation through this revolution of IT[38].

Pankaj Sharma (2009) in his book, "*E-Governance –The New Age Governance*" talked about how the modern government is trying to solved the problems and improved the delivery of its services to the citizens through the use of ICT. The primary issues identified included cultural disparities, the digital divide, legal complications, and inadequate ICT infrastructure. The book also included various case studies which helped in determining the status of growth that had taken place due to the process of e-governance[39].

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[37] Gupta, P., Bagga, R.K. (2008). *Compendium of e-governance initiatives in India*. Universities Press (India) Pvt. Ltd.
[38] Gopalsamy, N. (2009). *Information Technology and E-Governance*. New Age International Publishers.
[39] Sharma, P. (2009). *E-Governance – the new age governance*. APH Publishing Corporation.

Y.Pardhasaradhi, Rakesh Chetal and Namita Gupta (2009) in their book, "*E-Governance and Indian Society"* discussed a detailed study of various e-governance projects in 3 states i.e., Andhra Pradesh, Kerala and Karnataka. The project included the accessibility of ICT amongst men and women, the technology impact of ICT in different spheres like education, agriculture, land record system, automation of district administration, health sector, property registration, etc.[40]

C.S.R.Prabhu (2012) in his book, "*E-Governance: Concepts and Case Studies*" stated that the e-Governance system could act as an important machinery for the implementation of the Good Governance whose basic concerned was to bring about SMART governance. The book discussed various e-governance models, including the Broadcasting/Wider Dissemination Model, Critical Flow Model, Comparative Analysis Model, Mobilisation and Lobbying Model, and Interactive-Service Model. It also discussed various e-governance infrastructures and the evolutionary phases of e-governance.The book discussed 22 case studies – 18 case studies within India and 4 from the International.[41]

Laxminarayan Bindhani and Padmalaya Mahapatra (2016) in their book, "*E-Governance in India: An initiative of impact evaluation in Odisha"* had given a conceptual analysis of the electronic governance and the various NeGP in general. The various e-governance projects like Odisha State Wide Area Network (OSWAN), State Data Center, State portal adoption, Capacity building and State e – governance Mission Team (SeMT), CSC and adoption of Odisha IT Policy 2014 were among the various initiatives taken by Government of Odisha. The impact analysis of the use of e-governance had been done through an empirical study[42].

Mukesh H Hatik (2017) in his book, "*New Dimensions of E-governance*" said that e-governance was in use in different countries mainly for improving the function of the

[40] Pardhasaradhi,Y., Chetal,R., Gupta,N. (2009). *E-Governance and Indian Society*. Kanishka Publishers, Distributors.
[41] Prabhu, C.S.R. (2012). *E-Governance: Concepts and Case Studies*. PHI Learning Private Limited.
[42] Bindhani, L., Mahapatra, P. (2016). *E-Governance in India: An initiative of impact evaluation in Odisha*. Kunal Books.

government with the aim of delivering better services. Electronic voting system is among the new dimension which involved the use of electronic in counting of votes which reduced the workforce needed and thus saved a lot of time and money. The used of ICT for development, education and content management system, electronic signature system, corporate governance and environmental governance have been discussed in the book[43].

S.Pankaj (2017) in his book, "*Electronic Governance*" envisaged the views on the concept of the e-governance in a broad manner by including the legal, social and political spheres which are an important stepping stone for the growth of e-governance. The phases of e-government development include establishing a web presence, enhancing the web presence, creating an interactive web presence, facilitating transactions, and achieving a fully integrated web presence. It emphasised that the digital governance is concerned with the changes brought about by the use of ICT in service delivery and citizens participation in the governance[44].

Khanna et al. (2018) in their book, "Digital Drive, E-Governance and Internet Services in India (Quality Dimensions)," conducted a comprehensive study involving 52,000 respondents to evaluate the Quality of Internet Services (QoIS) in India. The survey was conducted by VOICE, a non-profit organisation established in 1983 on the Delhi School of Economics campus, dedicated to consumer education and empowerment. The study provided evidence that inadequate internet service could hinder the implementation of e-governance programs[45].

B.S.Hothi (2019) in his book, "*E-Governance*" talked about the e-governance infrastructure and strategies like building technical infrastructure framework across India in order to ensure better used of the services wherever the need for it is met. Cloud computing, global internet, framework for designing Service Level Agreements

[43] Khatik, M.H. (2017). *New Dimensions of E-governance*. Cyber Tech Publications.
[44] Pankaj.S. (2017). *Electronic Governance*. A.P.H Publishing Corporation
[45] Khanna, S.R., Singh, P., Kaur, A., Negi, D., Garg, M., Arora, Y. (2018) *Digital Drive, E-Governance and Internet (Quality Dimensions)*. New Century Publications.

(SLAs) for e-government projects are of much need for the proper implementation and for utilizing the system at its best[46].

M.Sumathy (2020) discussed the fundamentals of e-governance in her book titled "A handbook of E-Governance in India." She discussed topics such as the evolution of e-governance, its objectives, core principles, the different types of interactions that it facilitates, e-governance theories, and the pillars of e-governance. As the fundamentals of e-governance, the concept of good governance, models of e-governance, and various approaches and methodologies of digital programs have been playing a significant role up until this point. The broadcasting model, the comparative analysis model, the critical flow model, the e-advocacy model, and the Interactive Service model are all examples of models that fall under the category of e-leadership. The environmental and social challenges, as well as the economic and technical challenges, were among the most significant factors that contributed to the fact that its implementation was blocked[47].

MSR Krishna Prasada Rao & Chandramouli Reddy (2020) in their book, "*E-governance: A New Age Tool for 21st Century Challenges"* talked about the e – governance role as a transformational tool through the contributions from various eminent authors. The e – governance has brought about transformation in various fields like bringing into reality the concept of good governance, immense help in disaster management, police administration, Human Resource Management, Waste Management and a great initiative in public health. The author concerned was role of this system, application of the system, probability of providing immense helped to the government as a care provider to its citizen had been depicted in this book by the authors[48].

Vasu Deva (2020) in his book, "*E-Governance*" talked about e-governance in India and the global perspective as well. The General Information Dissemination Model, the

[46] Hothi, B.S., (2019). *E-Governance*. RSBA Publishers.
[47] Sumathy, M. (2020). *A handbook of E-Governance in India*. Abhijeet Publications.
[48] Rao, MSR.K.P., Reddy, C. (2020*). E-Governance: A New Age Tool for 21st Century Challenges.* Navyug Books International.

Critical Information Dissemination Model, the Advocacy Model, and the Interactive Service Model were the various models that were utilised in this process. It also highlighted that e-governance had made enormous contribution in various sectors like health, commerce, business, citizen centricity of administration, education, judicial system and also that it had brought innovation and changes in the development of the nation[49].

David Brown (2005) in his article, "*Electronic Government and public administration*" talked about the four domains encompassed by electronic government in governance and public administration – jurisdiction of the state and its roles and relationships within the economy and society; its relationships with the citizen and the rule of law (e-democracy); its internal operations and its relationship with the state actors, including the legislature, executive and courts. In public administration, the influential aspects of e-government encompass citizen-centered services, information as a public resource, the development of new skills and working relationships, along with accountability and management frameworks.The author emphasized that some kind of renovation in the Public Administration as an institution and a good leadership skill was much needed in order to ensure that the e-government realized its capacity in bringing changes to its functioning[50].

Payal Sharma, Anshumaan Mishra and Pavan Mishara (2011) in their article, "*E-Governance in India is the Effectual and Challenging Approach to Governance"* opined that adoption and formation of the needed institutions, policies and human resources were the key to successful and effective implementations of e-governance. It highlighted the various challenges that retarded the growth of e-governance into major factors which included human related factors, technological factors and other factors. The study also suggested strategies to make e-governance effective like

[49] Deva,V. (2020). *E-Governance*. Commonwealth Publishers.
[50] Brown, D. (2005). Electronic Government and Public Administration. *International Institute of Administrative Sciences, SAGE Publications*. *71*(2), 241-254. DOI: 10.1177/0020852305053883.

structure and Institutional Framework, Human Resource Policies, strengthening the existing organisation for it, training need assessment, sustainability strategy, etc.[51]

Nikita Yadav and V.B.Singh (2012) in their article, "*E-Governance: Past, Present and Future in India"* discussed the trending technology adopted by government of various nations in delivering services to their people i.e., application of ICT in the administration of the government, also known as e-governance.The various e-governance projects that have been implemented by Government of India, tools like cloud computing and open source were also suggested for improving the performance of the e-governance[52].

Neelesh Jain, Bhagwati Prasad Agnihotri, Ashish Verma (2013) in their article, "*Impact Assessment of E-Governance in India*" had highlighted the major e-governance initiatives taken by the Government in India like adoption of IT Act, 2000, establishment of National Taskforce of Information Technology and Software development, centre for e-governance, etc. The benefits in the adoption of E-Governance like conveniences it provided on the end of both parties i.e., government and the users, strengthening of the democratic functioning of the country, transparency it provided, automation of services and better relationship developed between government and its citizen[53].

R.M.Mukonza (2014) through his article, *"E-Governance: A new paradigm in Public Administration*" proposed that e-governance constitutes a novel paradigm in Public Administration. E-Governance could be placed under the paradigm of New Public Management because its concept of efficiency and effectiveness could be achieved through this system. Also, the used of ICT in government functioning enabled better communication between government and citizens which is one way of achieving good

[51] Sharma,P., Mishra, A., Mishara,P. (2011). E-Governance in India is the Effectual and Challenging Approach to Governance. *International Journal of Business Management, Economics and Review. 2(5),* 297-304.
[52] Yadav, N., Singh, V.B. (2012). E-Governance: Past, Present and Future in India. *International Journal of Computer Applications. 53(7),* 36-48.
[53] Jain, N., Agnihotra, B.P., Verma, A. (2013). Impact Assessment of E-governance in India. *International Journal of Engineering and Management Research*. *3(6),* 128-131.

governance. The ICT enabled governance led to major development in Public Administration. It is the concept which helped in redefining the relationship between government and various stakeholders and achieving the goals of Public Administration[54].

Kiran Yadav and Sanatan Tiwari (2014) in their article, "E-Governance in India: Opportunities and Challenges," emphasised e-governance as an effective instrument for fostering a harmonious relationship between the Government and citizens. The article categorised the challenges encountered by e-governance initiatives into front-end and back-end challenges. Front-end challenges encompassed significant illiteracy rates, absence of user-friendly interfaces, insufficient power supply in rural regions, limited broadband access, and a deficiency of e-governance initiatives. Back-end challenges encompassed inadequate system integration within a department and between departments, insufficient computer literacy among bureaucrats, and the implementation of technology without appropriate re-engineering processes[55].

L.S.Sharma and C.Lalnuntluanga (2015) in their article, "*E-Governance Initiatives in Mizoram: An overview*" discussed the need for doing the study and various e-governance initiatives in Mizoram. The study provided an overview of e-governance efforts in the state and identified challenges encountered by the state government in their implementation. E – Governance initiatives in Mizoram included- setting up of 3 administrative bodies (i.e., State e-Governance Council, State e-Governance Apex Committee, State e-Governance Mission Team), setting up of Mizoram State Wide Area Network (MSWAN), State Data Centre (SDC), State Service Delivery Gateway (SSDG), State Portal (SP), Crime & Criminal Tracking Network & System (CCTNS), CSC, e-district, computerization of land records and property registration. The obstacle being faced was that majority of the initiatives were being carried out by the central funded projects and the revenue required by the state could not be generated

[54] Mukonza, R.M. (2014). E-Governance: A new Paradigm in Public Administration. *Journal of Public Administration*. *49*(2), 499-511.
[55] Yadav, K., Tiwari, S. (2014). E-Governance in India: Opportunities and Challenges. *Advance in Electronic and Electric Engineering.* *4*(6), 675-680. https://www.ripublication.com/aeee_spl/aeeev4n6spl_21.pdf.

which would result in services disruption after the expiry of free service period for those projects. In spite of those limitations, the study highlighted that high literacy rate & good ICT penetration skills proved to be a contributing factor for spreading e-government services to the masses as a whole[56].

Nandita Kaushal (2016) in her article, "*The plausibility of E-Governance as a Public Service Delivery Mechanism in India"* talked about the evolution of e-governance in India, the various MMP, the area of concerned through the Digital India Programme. The obstacle and the challenges that had been encountered in the fulfillment of its services through the use of the mechanism are resistance to change by the government officials, high project costs, shortage of specialists and deep focused on the 'electronic' part rather than the governance which is supposed to be of great concern[57].

P.Paramashivaiah and B.K.Suresh (2016) in their article, *"E-Governance: Issues and challenges in India"* studied the various e-governance projects that had been implemented in various states in India in order to learned the actual meaning and the functioning of e-governance. The major challenges include technical illiteracy, poverty, inequality, unawareness about the initiatives, lack of infrastructure and impediments for the re – engineering process[58].

Chetia SRB (2016) in his article, "*E-governance in North-East India*" highlights the need for taking initiatives in the e-governance sectors especially in the rural areas for the purpose of development. The need of the initiatives for grass-root administration development and for coping with other parts of India for development was also emphasized. It also highlighted the problems that hinder the growth of e – governance

[56] Sharma, L.S., Lalnuntluanga, C. (2015). E-Governance initiatives in Mizoram: An overview. *International Journal of Management and Social Science Research Review. 1*(11), 28-37. http://ijmsrr.com/downloads/260520155.pdf.
[57] Kaushal, N. (2016). The plausibility of E-Governance as a Public Service Delivery Mechanism in India*. Socrates*. *4(3),* 79-90.
[58] Paramashivaiah, P., Suresh, B.K. (2016). E-Governance: Issues and Challenges in India. *OIDA International Journal of Sustainable Development*. *9(8),* 11-16.

like failure of the government in learning the usefulness of the system, rural – urban digital divide, illiteracy and low empowerment among the masses on the use of it[59].

Shreyasi Ghosh (2016) in her article, "*The essence of E-Governance in the modern era of Indian Public Administration Today*" talked about "reinventing government" which led to the evolution of Good Governance as a concept whose main concerned was to bring about a transparent, accountable and citizen-centric form of governance. The e-governance system which involved the use of ICT tools in the delivery of services to citizens had been advocated to improve the activities of public sector organizations[60].

Dinoroy Marganda Aritonang (2017) in his article, "*The impact of E-Government System on Public Service Quality in Indonesia"* emphasized e-government system as an important tool for transforming the work culture and quality of public service from the traditional system to the modern system. E-Government enhanced and improved the communication system between government agencies and their constituents by providing information and online services to the citizens at a relatively low cost and through the websites. Through this study it was found that the implementation of the e-government policy does not enhance the public delivery system, it rather caused problems. The practical evidences, policies and bureaucratic reforms were considered to be the way to modernised the Government and public services[61].

Mohammad Abdul Salam (2017) in his article, "*E-Governance for Good Governance: Experiences from Public Service Delivery"* had tried to prove the validation of e-

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[59] Chetia, S.R.B. (2017). E-Governance in North-East India. *Journal of Political Sciences and Public Affairs*. *4*(2). 1-3. https://www.longdom.org/open-access/egovernance-in-northeast-india-2332-0761-1000201.pdf

[60] Ghosh, S. (2016). The essence of E-Governance in the modern era of Indian Public Administration Today. *SOCRATES*. *4*(3), 110-123.

[61] Aritonang, D.M. (2017). The impact of E-Government System on Public Service Quality in Indonesia. *European Scientific Journal*. *13*(35), 99-110. Retrieved from – http://dx.doi.org/10.19044/esj.2017.v13n35p99

governance for good governance. The quantitative research had shown that e-governance provided immense helped in providing services effectively and efficiently to the public though the District Electronic Service Centre (DESC), the used of e-governance services leads to the implementation of the objectives of good governance, policy implications, etc[62]

Rashmi Chaudhary (2017) in her article, "*Opportunities and challenges for e-governance in India"* highlighted the important usage of ICT in governance for the achievement of Good Governance. It also highlighted the important factors for the successful implementation of the e-governance, good governance, challenges faced and the future prospects of e-governance in India[63].

Vaibhav Gandhi and C.K.Kumbharana (2017) in their article, "*E-Governance in Local Bodies in India"* talked about the evolution of e-governance, four pillars of e-governance, e-governance in local bodies. The Urban Local Body (ULB) and Rural Local Body (RLB) were the local bodies for e-governance who basically does the hiring of the third party in the implementation of the online portal for the conveniences of the worker and the citizens for whom it was meant[64].

J.Sridevi, K.Senthil Kumar and M.Radhikhaashree (2017), in their research article, "*E-governance in India: Opportunities and challenges*" mentioned that the used of e-governance system was not only to the public sector but also the administrative system and policies in the private sector. Low literacy, user friendliness of government websites, awareness on the use of IT related applications, lack of integrated services, etc were among the challenges faced by the government in the implementation of e-governance in India.[65]

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[62] Salam, M.A. (2017). E-Governance for Good Governance: Experiences from Public Service Delivery. *Communications on Applied Electronics. 7(3),* 26-29.

[63] Chaudhary,R. (2017). Opportunities and challenges for e-governance in India. *International Journal of Science Technology and Management. 6(2),*678-684.

[64] Gandhi, V., Kumbharana, C.K. (2017). E Governance in Local Bodies in India. *International Journal of Scientific and Research Publications*. *7(2),* 122-127.

[65] Sridevi,K., Kumar,S.K., Radhikhaashree,M. (2017). E-Governance in India: Opportunities and Challenges. *International Journal of Pure and Applied Mathematics. 117*(15), 161-167.

Tracy Lalduhawmi (2018) in her article, "*Developmental Impact of e-Governance*" talked about the e-governance initiatives in Mizoram, e-governance society in Kolasib district, services provided under e-district of Kolasib and analysis of the working of e-governance in Kolasib district. The study was conducted with the objectives to study e-governance projects in Kolasib district of Mizoram and to examine the developmental impact of e-governance CSC of Kolasib district was used as the based for evaluation of data. The services provided under the e-district included application and issuing of tribal certificate, residential certificate and income certificate. The findings of the study indicated that availability and proper functioning of the projects, usability of the services and systems among the Government employees as well as the people will be the factor that contributed to the growth and development of the country[66].

Adelana, Olamide Samson (2019) in their article, "*Electronic Governance and Effective Public Administration (Study in Nigeria)*" believed that the adoption of electronic governance could strengthen the working of the democracy and led to development. The principal-agent theory has been emphasized in particular to understand the positive impact of e-governance on public administration. This theory main concerned is on the problems that could possibly happened between the principals and agents due to lack of accountability and transparency. The study suggested that e-governance could play an effective role in corruption control, poverty reduction which enabled a cost – effective public service delivery system[67].

Jean Damascene Twizeyimana, Annika Andersson (2019) in their article, "*The public value of E-Government – A literature review*" studied the public value of e-government through content analysis on the existing literature from leading journals

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https://www.researchgate.net/publication/337945877_EGovernance_in_India_Opportunities_and_Challenges

[66] Lalduhawmi,T. (2018).Developmental Impact of E-Governance. Open Access International Journal of Science & Engineering. 3(2), 1-5. http://www.oaijse.com/VolumeArticles/FullTextPDF/164_1.DEVELOPMENTAL_IMPACT_OF_E-GOVERNANCE.pdf

[67] Adelana, Samson, O. (2019). Electronic Governance and effective Public Administration (Study in Nigeria). *International Journal of Social, Politics & Humanities*. *3*(2), 271-285.

and relevant research papers. The research identified six dimensions of the public value of e-government: enhanced public services, increased administrative efficiency, capabilities for open government, elevated ethical conduct and professionalism, strengthened trust and confidence in government, and augmented social value and well-being.[68]

Ningthoujam Irina Devi (2020) in her article, "*Online payment during Pre and Post Covid-19 scenarios: A case study of Electricity Bill Payment in Mizoram*" highlighted the meaning and importance of the concept of e-governance and digital India. She is of the opinion that the e-governance had shifted its focused from being busy with computerisation of government offices only to being a provider of digital technology making conveniences for citizens at their door step. All these initiatives had led to the emergence of the electronic payment system which had saved a lot of time, energy thereby providing conveniences to the users and making the society a cashless one. It also highlighted emergence of the online bill payment system in Aizawl and the status of the e-payment system during the pre and post pandemic COVID-19 stating that people were more into the use of the e-payment ever than before. She also pointed out that due to being in the initial stage of implementing the system there are several problems and challenges like poor connectivity, lack of awareness among the users, digital divide, etc. She concluded by highlighting the need for popularizing the use of the system and there are hundreds of miles to make the best use of the system[69].

The above mention literatures were studies related to E-governance. The above literatures have shown that there are number of studies on the e-governance system in developed and developing countries as well as in India as a whole. Meanwhile, it was found that the studies on electronic governance and its initiatives in service delivery

[68] Twizeyimana, J.D., Andersson, A. (2019). The public value of E-Government – A literature review. *Government Information Quarterly*. *36*, 167-178.

[69] Devi, N.I. (2020). Online payment during Pre and Post COVID-19 Scenarios: A case study of Electricity bill payment in Mizoram. *Mizoram University Journal of Humanities & Social Sciences. 6*(2), 168-174.
http://mzuhssjournal.in/images/resources/v6n2/irina.pdf

within the context of public administration in particular were very limited. Therefore, this study is being carried out in order to fill the research gap from the above literature.

1.14. SCOPE OF THE STUDY

The present research work focused on the electronic governance and the service delivery mechanism in Mizoram with special reference to Aizawl city. The study highlighted the historical background of Electronic Governance and its various projects in Mizoram. The study was conducted to see how far the digitalisation of offices under the Government of Mizoram has improved the administrative capability and enhance better governance. The other aspects of the study were to study how the e-payment system has emerged and its purposes and the use of it through the Public Health Engineering (PHE) and Power & Electricity (P&E) Departments. The study also evaluated the awareness of the citizens in the e-governance process. Also, the study highlighted the problems and challenges that are faced by both the parties i.e., Government and citizens in the implementation and the use of it.

1.15. OBJECTIVES OF THE STUDY

1. To study the historical background of electronic governance and its various projects in Mizoram.
2. To evaluate how the digitalisation of office management has improved the administrative capability in selected departments under Government of Mizoram.
3. To evaluate the use of electronic payment system undertaken by Public Health Engineering Department (PHED) and Power & Electricity (P&E) Department, Government of Mizoram.
4. To evaluate the citizens awareness in the electronic governance process.
5. To study the problems and challenges face by the Government in the implementation of the electronic governance in the administrative functioning and the delivery of services to the citizens.

1.16. RESEARCH QUESTIONS

1. What is the historical background of electronic governance and the various projects in Mizoram?
2. How does the digitalisation of the office management enhance the administrative capability in selected Government offices?
3. How do the people in Aizawl city make used of the electronic payment system?
4. How do citizens become aware of the e-governance process?
5. What are the problems and challenges faced by the Government in the implementation of the electronic governance system for delivery of public services?

1.17. METHODOLOGY

The present research work is a study on the electronic governance and its service delivery mechanism in three aspects i.e., how the digitalisation of office management has enhanced the administrative capability, the use of the electronic payment system for water and electricity bill payment and the evaluation of citizens awareness in the e-governance system. The present research work is descriptive in nature. It uses the mixed method (i.e., both the qualitative and quantitative methods) for collection of data and Microsoft Excel, 2019 for analysis of the data. It uses both the primary and secondary sources of data.

For the purpose of studying how the digitalisation of the office management has enhanced the administrative capability, convenience (non-probability) sampling method was used to draw samples from the selected 43 government department in Aizawl based on the portfolios assigned to the Ministers under Government of Mizoram. A set of questionnaires had been prepared and administered to the officials. Apart from the questionnaire, primary data was collected using semi – structured interview with the officials.

In order to study the uses of e-payment method by the people for electricity and water bill payment and evaluate the awareness of the citizen in e-governance process, samples were drawn from Aizawl district. For the purpose of studying these two areas,

a total of 550 respondents each was randomly selected. Each questionnaire were made available in English and Mizo languages. The data collected through the questionnaire was divided into two sections for the purpose of analysis – demographic profile of the respondents and the responses of the participants with the real context of study. Semi-structured interview method was also administered to the Government officials. The primary data was also collected through the official Government documents, reports and statistical handbooks.

The secondary data was collected from books, research articles, published theses, academic journals, newspaper, etc. Electronic medium like Internet sources was also used as an important means for collection of data.

1.18. SIGNIFICANCE OF THE STUDY

Through the findings of the study, we will be able to know the electronic governance and its service delivery mechanism in Mizoram. The study will highlight how the digitalisation of office management has enhanced the betterment of the administrative system. The study will also highlight the importance of the e-payment system and the conveniences it provides to the people. Also, the citizens awareness in the e-governance process will also be highlighted. In the meantime, it will also highlight the problems encounter by both the parties i.e., the government departments and the users with regard to the use of the system.

1.19. CHAPTERISATION

CHAPTER I: Introduction

CHAPTER II: Historical background of Electronic Governance and its various projects in Mizoram

CHAPTER III: Digitalisation of Government offices in Aizawl

CHAPTER IV: Uses of e-payment system in Aizawl

CHAPTER V: Citizens Awareness in Electronic Governance

CHAPTER VI: Conclusion

1.20. Concluding Remark

In this chapter, an introduction to the electronic governance had been discussed along its differentiation with e – government, types of e – governance model, the evolution in the Central and State government, etc. The concept of electronic governance and its relation with various other concept like PPP, Smart City Mission and Digital India had also been highlighted.

CHAPTER II

HISTORICAL BACKGROUND OF ELECTRONIC GOVERNANCE AND ITS VARIOUS PROJECTS IN MIZORAM

The previous chapter consisted of the development of electronic governance in which the factors and concept that had led to the emergence of e – governance like IT revolution, good governance, NPA, NPM, etc had been highlighted. So, in the light of the development at the central level, a need was felt for the establishment of the parallel agency at the state level. The present chapter will highlight the historical background of electronic governance and its various projects in Mizoram particular.

2.1. Mizoram and Governance Challenges

The Mizos, believed to migrate from the Sinlung region of China, were a group of people who migrated to India in the 18th and 19th centuries (Liangkhaia,1976)[70]. They faced numerous tribal aggressions and reprisal campaigns throughout the 18th and 19th centuries. The Mizo Hills were officially included into British-India in 1895 and designated as a Backward Tract in 1919 (Barpujari, 1981)[71]. The Mizo Common People's Union was established in 1946, followed by the Lushai Hills Autonomous District Council in 1952. However, their ambitions were only partially fulfilled. In 1955, the Eastern India Union (EITU) was established, advocating for an independent state for all hill districts of Assam. During the famine of 1959-1960, the Mizo Cultural Society was established, which later became the Mizo National Famine Front (MNFF). In 1961, the MNF was established with the objective of attaining sovereign independence for Greater Mizoram. In 1967, the MNF was banned, and the call for statehood began to gather renewed impetus. In 1986, Mizoram was officially established as a state, with Hiteshwar Saikia as the Governor.[72]

Mizoram is located in the extreme corner of North – East India and is surrounded by Bangladesh and Tripura in the West, Burma in the East and South and Assam and

[70] Liangkhaia, Rev. (1976). *Mizo Chanchin*. Academy of letters. p.9
[71] Barpujari, H.K. (1981). *Problems of the Hill Tribes: North East Frontier*. Gauhati. *3.*
[72] Lalrinzuali, M. (2015). *Mizoram: The journey to statehood*. Zubaan Books.77

Manipur in the North (Rualthansanga,2015)[73]. Mizoram occupies an area of 21,087 sq. kilometer and lies between 21° 56 N – 24° 31N and 92°16E – 93° 26E[74]. The climate in Mizoram is moderate. During the coolest months (November through February), temperatures in Aizawl typically rise from the low 50s (low 10s C) into the high 60s F (about 20 °C) daily (Britannica, 2024)[75]. In the warmest months (June through August), minimum temperatures are in the high 60s F, while maximum temperatures usually peak in the mid-80s F (about 30 °C). Rainfall averages about 100 inches (2,500 mm) annually, with most brought by the southwest monsoon (which blows from May to September)[76].

Agriculture is the dominant economic activity of Mizoram, engaging more than two-thirds of the workforce in the early 21st century. The expected annual economic growth rate for Mizoram in 2022-2023 is 10.14%, surpassing the rates of 9.50% in 2020-21 and 9.80% in 2021-22 (Economic Survey of Mizoram, 2023)[77] The Gross State Domestic Product (GSDP) is projected to achieve a value of Rs. 21000.56 crore, reflecting a growth of 13.55% compared to the previous year (Economic Survey of Mizoram, 2023)[78]. The Gross State Value Added (GSVA) has reported an average yearly growth rate of 10.43% from 2011-12 to 2022-23 (Economic Survey of Mizoram, 2023)[79]. The sector that makes the greatest contribution to the GSVA is the service sector, which encompasses a wide range of services such as transportation, storage, communication, commerce, hotels, finance, real estate, and public administration. Over the course of 2011-2012, however, its proportion has been progressively decreasing. The growth of the sector is moderate, coming in at 8.12% in 2022-2023, however it is not as strong as the growth of agriculture and manufacturing.[80] The areas of Public Administration, Trade and Commerce,

[73] Rualthansanga, R. (2015). Creation of Regional Council within Mizo Hills District. EBH Pubishers. 1
[74] ibid
[75] Britannica. (2024). https://www.britannica.com/place/Mizoram
[76] ibid
[77]Planning & Programme Implementation department (2022 – 2023). Economic Survey of Mizoram. Government of Mizoram. p.6
[78] Ibid
[79] ibid
[80] ibid

Education, Health, and Other Services are among the areas that provide significant contributions. For the year 2022-23, the expected per capita income of Mizoram was Rs. 232126.00, which is an increased from the previous year's projection of Rs. 198961.92.[81]

Nevertheless, the state continues to be economically underdeveloped, since a significant number of employed individuals continue to depend on conventional lifestyles as a result of geo-climatic restrictions, limited dissemination of knowledge, and financial limitations. Mizoram's isolation, connectivity challenges, dearth of job prospects, and absence of economic support systems impede development. Although Mizoram has advantageous geo-climatic conditions for agricultural, horticulture, and floriculture production, low crime rates, and strong social harmony, its strategic position with Bangladesh and Myanmar provides a well-suited environment for trade and logistical needs. In order to fully exploit its potential, the administration initiated the 'Handholding Scheme for Sustainable Livelihood' as the focal programme of the State.[82]

The procedures of governance around the world, particularly in India, have been profoundly altered by technological advancements. Efficiency, transparency, and public engagement have all been improved, costs have been cut, and decision-making has been optimized as a result. Automating operations, managing data, implementing open data initiatives, and keeping digital records have all contributed to the simplification of administrative work. Online access to government services is increasingly available to citizens, and e-Governance platforms make it possible for governments to improve their responsiveness. Through the use of analytics and predictive modelling, data-driven decision-making is made possible, which in turn enables governments to make decisions that are informed[83]. Through the

[81] Planning & Programme Implementation department (2022 – 2023). Economic Survey of Mizoram. Government of Mizoram. p.10

[82]Planning & Programme Implementation department (2022 – 2023). Economic Survey of Mizoram. Government of Mizoram. p.13

[83] Smith, J. A., & Johnson, R. L. (2020). *Enhancing governance through e-Governance: Efficiency, transparency, and public engagement*. *Public Administration Review, 80*(4), 523-536. https://doi.org/10.1111/puar.13145

implementation of digital inclusion, government services have become more accessible to a wider audience, including those who live in underserved or distant locations. Through the implementation of digital processes and automation, it has been possible to accomplish both cost reduction and resource optimization. Sensitive government data is protected by advanced cybersecurity safeguards, which also assure compliance with rules. Improved policy implementation and governance are both made possible by the use of digital platforms for governance. Nevertheless, there are obstacles that need to be addressed, such as resistance to change and the information technology gap. Technology has the potential to further revolutionize governance, making it more responsive and effective in its capacity to serve the public. This transformation can be achieved through continual innovation and deliberate implementation.

Access to digital technology is essential for enhancing efficiency and broadening market reach, particularly in geographically isolated regions such as Mizoram. Although there is a significant number of subscribers and a high density of telecare, 165 villages still lack mobile coverage. In order to attain comprehensive coverage, a total of 189 mobile towers will be deployed, which may result in areas of limited network coverage between communities.[84] The issue could be attributed to the inconsistent network service offered by different telecommunications service providers. In response to this issue, several initiatives and plans are now being developed. These include the implementation of Gigabit Passive Optical Networks, the provision of Inter District Wireless Networks, and the establishment of Mizoram State Wide Area Network to connect districts and surrounding rural areas. Furthermore, the Department of Telecommunications is now executing a Comprehensive Telecom Development Plan to deploy mobile telephone towers in specifically designated localities and along major national routes.

The state government keeping these challenges and way forward has implemented several e – governance projects in order to improve the development of IT skills and

[84] Planning & Programme Implementation department (2023 – 2024). Economic Survey of Mizoram. Government of Mizoram. p.139 – 140

knowledge has also conducted training programmes through DICT every once in a while. Not only that, it has adopted various projects to enhanced easy delivery of services to the people and promotes inclusivity. So, in this regard, I am trying an attempt to understand about the development of e – governance in Mizoram and how ICT is serving as a growth stimulator for the state.

2.2. **Emergence of E – Governance in Mizoram**

Ever since the attainment of statehood, the Government held under different parties basically the Indian National Congress (INC) and Mizo National Front (MNF) had tried their best in guiding, adopting and implementing various development projects. So, among the major issues that had been faced was that of transportation, communication and delivery of services[85]. So, in order to overcome these issues, certain actions had been taken, let us take an example of development of IT sector where the Government after setting up of a full fledge DICT has brought a lot of improvement and creates a good connection between the Government and citizens through the use of ICT tools.

The currently established DICT operated under the Authority of the Department of Industry, which served as its nodal department until October 2004. Subsequently, on November 8th, 2004, a position of Principal Informatics Officer (PIO) was established and assumed by the Deputy Secretary at that time, who served as both PIO and Deputy Secretary. Starting from this point, the Planning and Programme Implementation Department served as the nodal department until the Directorate of ICT was established in October 2008. The purpose of its creation was to establish guidelines for policy formulation, planning, execution, and monitoring of Information & Communication Technologies and e-Governance initiatives. On 20th November, 2012, the position of Head of the Department, namely the Principal Informatics Officer, was elevated to the rank of Chief Informatics Officer.

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[85] Sarma, P. (2018). *Development challenges in post-statehood Mizoram: Transportation, communication, and service delivery*. *Journal of South Asian Development, 13*(2), 145-165. https://doi.org/10.1177/0973174118770320

Since the inception of the DICT was only in 2008 and the internet had been in existence way before the establishment of DICT, there was no profound record of the coming of Internet into Mizoram (RTI, 2024). Also, each Department had acquired an internet connection on their own, so, DICT do not have any record as and when internet services had been in used by various Government Departments (RTI, 2024). Computers were believed to have been in used by the Government of Mizoram from the early 2000s (RTI, 2024).

In order to enhance a sustainable growth and development, the DICT has given its best support to Government of Mizoram by enabling them to make use of the ICT tools. It enables the permissible Government related information easily accessible at the reach of a common man. The vision of the Department is to use – "ICT as a transformational tool for the State of Mizoram" and the mission of it being to enable – "ICT Development through creation of e-Infrastructure for delivery of e-Services, promote ICT, facilitate Research Development, Capacity building and empowerment of Government employees and Citizen, provide awareness on Cyber Crime and Security"[86].

In the Eighteenth Schedule of "The Government of Mizoram (Allocation of Business) Rules, 2019" the Allocation of business for the Department of ICT has been clearly mentioned as under [87]

1. Policy matters relating to electronics, information technology, and communication technology.

2. Cyber laws, cyber security, The Information Technology Act, 2000 and Rules and other IT related laws.

3. Promotion of electronics, including internet; IT and IT enabled services; digital transactions including digital payments.

[86] https://dict.mizoram.gov.in/page/mission-vision.
[87] https://dict.mizoram.gov.in/page/allocation-of-business-05-19-12

4. Promotion of electronics design and manufacturing, hardware/software industry including knowledge – based enterprise, etc.

5. Promotion of standardization, testing and quality in IT and standardization of procedure for IT application and tasks.

6. Assistance to other Departments in the promotion of e-Governance, e-Commerce, e-Medicine, e-Infrastructure, etc.

7. Promotion of information technology education and IT based education, digital literacy, etc.

8. Coordination of information technology related matters with national and international agencies, bodies and institutions relating to information & communication technology.

9. Control and regulation of internet service provider within the State.

10. IT related public sector undertakings and societies.

11. Technical matters relating to Unique Identification (UID).

12. Communication towers.

13. Infrastructure development for electronics; IT and telecommunication including internet.

14. Streamlining procedure and Issue of NOC for procurement of hardware and software including software development.

15. Capacity building in IT and e-Governance.

The Chapter 18 of Right to Information (RTI) Manual of DICT Section 4(1) (b) of RTI Act, 2005 mentioned the initiatives taken by the Department through the Digital India/ NEGP. The major initiatives taken up are –

1. Mizoram State Wide Area Network (MSWAN)

2. E – District
3. Mizoram State Data Center (SDC)
4. State Portal & State Service Delivery Gateway
5. Common Service Center

MSWAN is a project which is responsible for the designing and implementing of the information channel for the Mizoram State e– Governance applications. It serves as the main supporter for all the entities within the government operations and an important communication tool as well.

E-District is one of the ongoing State MMP which comes under the realm of the NeGP. It is created so as to popularize the Government schemes and policies as well as delivering of services efficiently to the citizens. The service is carried out through the CSC and portal.

Mizoram SDC combines the work of delivery of services, IT and e-Governance infrastructure so as to fulfil the goal of G2G, G2C and G2B by the NeGP. The delivery of services will be fulfil with the help of CSC and SWAN.

State Portal & Service Delivery Gateway enables the download and submission of applications a lot more easier for the citizen which is hosted on the State Portal (SP) which will act as the front end interface and to the initiatives and services provided by the MSEGS.

CSC is a service delivery center point for the citizens and any other service sectors. As of 15th February, 2024 (RTI) there are 1071 CSC in all the districts of Mizoram which are being operated by Village Level Entrepreneurs (VLE). The services it provided includes – Income Certificate, Schedule Tribe certificate, etc.

2.3. **CENTRAL GOVERNMENT PROJECTS/INITIATIVES IN MIZORAM**

The initiative for implementing the Central Government policies have been taken up in the State by the Department of Information and Communication Technology and they are as given below:

1. Telecom Policy

'The Mizoram Telecom Infrastructure Policy, 2020' approved by the Council of Ministers meeting on 1st October, 2020 seeks to addressed the issue of telecom infrastructure and provides solution to meet the needs for providing stable connectivity and robust infrastructure. The 'Telecom Policy' seeks to implement a robust overground & underground infrastructure so as to meet the increasing demands due to rapid growth in the usage of mobile data and interest data connectivity. It requires increase in installation of more towers and cables so as to bring about a transformative and digital empowerment.

2. State Broadband Mission

To achieve the goals of the National Broadband Mission, a State Broadband Committee was established at the state level, chaired by the Chief Secretary of the Government of Mizoram. The objective of the mission was to provide universal 50Mbps broadband access to every citizen by 2022. The Mission was set up to bring about the expansion of broadband services and the Broadband Readiness Index (BRI) related matters.

3. Bharat Net

The Bharat Net project in collaboration with the State Government and private sector works together to fulfil the vision of Digital India. The aim of the project is to provide an affordable broadband connectivity of 2Mbps to 20Mbps for every household without any bias. The Universal Service Obligation Fund (USOF) financed these projects, which aimed to improve telecommunications services in remote regions of the country. The objective is to enhance the provision of e-health, e-education, e-banking, and other services to rural India.[88]

[88] Achievements Report 2020 – 2021. Department of Information and Communication Technology, Government of Mizoram. P.9

4. Mobile coverage to Uncovered Villages

This project aims at providing Mobile network to all the uncovered villages. As per the Comprehensive Telecom Development Projects (CTDP) report, 232 villages were covered out of 252 villages identified to be uncovered by mobile towers. The remaining 20 villages were not covered due to accessibility issues. A total of 165 villages were identified as uncovered villages out of 864 villages were further sent to the concerned authorities for consideration in the next phase.

5. Implementation of a Smart Classroom in a Minority Concentration Area under PMJVK

The project aims at building a good teaching and learning environment through the adoption of the latest IT infrastructure and new teaching techniques by using it. Computers, Multimedia Projectors, Laptop, white board, etc have been use and introduce to replace the traditional way of teaching. The projects were confined to minority concentration areas to class IX and class X in the selected 20 Schools.

6. IT Education for 150 Schools

In order to create awareness and developed the culture of using computer as part of the curriculum in the school, this project was created. It was implemented in 150 school in order to create awareness and IT literacy among students and teachers.

2.4. STATE / DEPARTMENT E – GOVERNANCE INITIATIVES

The initiatives that have been taken up solely by the State Government are as given below:

1. Monthly Expenditure Report (MER) – Finance Dept.

In order to solve the issue of revenue and expenditure which were often experienced due to inadequate details of information from the department, an online portal has been developed for submission of their monthly expenditure by the government. The system has certain features like –

i. departmental dashboard, which enables the departments to log in to their own dashboard wherein report could be submitted and received from time to time.
ii. Finance Department Dashboard, is setup in such a way that the monthly expenditure of each department was made available for the finance Department officials to access on it easily. It enables the competent authority to know the status of each department and defaulters are given a notification for it.

2. Creation of an Online Platform for the Mizoram Public Service Commission (MPSC)

An exhaustive online portal was developed for MPSC in order to provide convenience to its users without having them to physically present in the office. This system has creative features like – applicant management, publication of advertisement, application submission, payment, application processing, issuance of admit card and validation of admit card and result publication.

3. Online Project Monitoring and Evaluation system (Phase – 1) for planning & Programme Implementation Department.

In order to effectively monitor and evaluate the projects which were implemented by different department, an online portal has been developed for the concern authority i.e., planning and programme implementation department. This system allows the submission of report by different departments which are made easily accessible for decision maker.

4. Government Website Excellence Awards 2020

With the increase in realisation of the importance of maintaining websites by government department, a need was felt for creating awareness among the departments in maintaining their websites keeping in mind the conveniences and usefulness it provides. In order to accomplish the wish, the department of ICT proposed to organised "Government Website Excellence Awards" every year. The first award was given on 30th March 2021 to Department of Information and Public Relation.

5. Content Management System Monitor (CMS)

The DICT in collaboration with the General Administration Department (GAD) developed the CMS monitor. This system monitors a statistical content published by government departments who use the Senhri CMS.

6. Covid Task Force on mobile and internet services app

This App has been developed in order to solve the possible problems which are encountered during the pandemic. The Local Task Force was entrusted with the responsibility to monitor the services which are provided through different sources like PGCIL, Airtel, Jio & Vodafone.

7. mCOVID - 19 Portal and Mobile App

This App was used as one of the tools to fight against the pandemic. Features of this App included statistics, inter-state pass, inter-district pass, stranded in Mizoram, quarantine monitor, citizen helpline report, Task Force registration, advisory video, CM relief fund payment system, volunteer registration and suggestion.

8. Fish – Info Mizoram

Through this system, the farmers registered themselves by sending their personal details and pond location, which are enabled to be accessed by the authorities for verification. It encompasses additional features such as an integrated histogram that illustrates fish ponds by district, the number of farmers per district, and the number of villages per district.

2.5. MIZORAM STATE E – GOVERNANCE SOCIETY (MSEGS)

The MSEGS, an autonomous society, was founded in 2005 under the Department of Information and Communication Technology, with the Chief Secretary of the State serving as its chairman. It is a Non-Profit Organisation registered under the Society Registration Act, XXI of 1860. All important projects related to Information Technology and e-Governance is being implemented through this society.

The vision of the society is "To help the state government for transforming governance into citizen centric services and provide smart service delivery system."[89] The mission of the society is:[90]

i. creating enterprise architecture and provide smart solution.
ii. Assists state government in e-governance to improve public service delivery mechanism.
iii. Skill development to unemployed youth in emerging technologies for employability in government and private sector.

[91]The objectives of the MSEGS are stated as under –

i. Implementation, oversight, and assessment of diverse e-governance initiatives within the state.
ii. Provide citizen facilitation centre or common service centre in every village to delivery various services to the citizen.
iii. Assist the state government to collect revenue through online and transfer the revenue collected to the concerned departments.
iv. Improve government service delivery system with emerging technologies.
v. Provide share infrastructure to all government departments for network, data centre and public service delivery centres reducing the total cost of ownership.
vi. Help the state government for implementing Right to Public Services (RTPS) to reduce corruption and to increase transparency and public accountability.
vii. Provide technology and management consultancy services to the state government for implementation of e-governance in various departments.

[89] https://msegs.in/aboutus
[90] https://msegs.in/aboutus
[91] https://msegs.in/aboutus

viii. Promote local IT entrepreneurs by enhancement of quality management system and business continuity to sustain in the digital world.

ix. Conducting impact assessments and evaluating e-readiness for the state government's e-governance initiatives.

x. Manpower outsourcing to state government departments by recruiting, deployment and HR management of specialised resources.

xi. Assist the state government to setup cyber security lab enhancing safe and secure cyberspace in the state.

The societal objectives of the MSEGS are "To provide the economic, scientific, technological social and cultural development by promoting the utilization of IT. Computer-Communication Networks, Informatics etc. To promote further development of services, technologies, infrastructure and value-added computer and computer communication services."[92]

The e-Governance Society has been established for each District capital except the newly emerging three districts i.e., Hnahthial, Khawzawl and Saitual. The society is set up in the districts so as to promote the e-governance among the people. The society is established with the same objectives in all the districts. The objectives of the society are as follows:[93]

i. To guarantee that all participants and external agencies were closely coordinated.
ii. To prepare the installation sites and transfer them to the Implementing Agency.
iii. To guarantee the involvement and backing of all the district administrations' employees and affiliated sections.
iv. To identify the staff members who require training at different levels.

[92] https://dict.mizoram.gov.in/page/mizoram-state-e-governance-society

[93] https://dict.mizoram.gov.in/page/aizawl-district-e-governance-society

v. To evaluate the installation, commissioning, and maintenance of the application software.
vi. To implement measures to reduce any potential risks that may arise during the project's execution.
vii. To oversee the project's overall advancement.
viii. Manage change.
ix. Collaboration with the Consultant Partner and the Implementation Partner team.

The projects that have been initiated and developed by the MSEGS are –

i. E – District
ii. Implementation of G-PON Technology in Mizoram
iii. Inventory Management System
iv. Content Management System
v. District Intranet Connection
vi. E – Bharat
vii. Ease of Doing Business (EODB)
viii. Inner Line Pass Portal
ix. Interactive Digital Classroom
x. Right to Public Service Portal
xi. State Data Center
xii. State Service Delivery Gateway & State Portal
xiii. Common Service Center
xiv. Mizoram Scholarship Portal
xv. Online Property Return
xvi. Thenzawl Golf Resort

E – District

It was developed in 2007 by MSEGS and is hosted at Mizoram State Data Center. E – district is developed with the motive of delivering of government services to the citizen using the CSC. The project is funded by MeitY and implemented within four (4) years.

The project is designed to improve the functioning of the district through the help of CSC within the time frame. The objectives of the e – district are as follows:[94]

i. Decrease in the duration required for citizens to access services. A comprehensive service delivery point that operates efficiently, reliably, and interactively via authorised service centres, including CSCs, Rural Information Kiosks (RIKs), and e-District Facilitation Centres.
ii. Enhance transparency in the delivery system - the applicant visits the authorised service centre without direct interaction with the officials responsible for processing, and can monitor the application status online.
iii. Enhance the processing time of applications within district administration and subordinate offices to deliver services to citizens more efficiently. Guarantee rapid processing of public cases, appeals, and grievances, along with the dissemination of information within established service levels.
iv. Simplified access to government services for the general public with minimal procedural requirements via authorised service centres such as CSC, RIK, and e-District facilitation centres.

Implementation of G-PON Technology in Mizoram

This project is implemented in 2007 and is hosted at Mizoram Secretariat, MINECO and eight (8) District Headquarters. The goal of this project is to facilitate the Secretariat offices in all the eight (8) districts with better internet services for their work. The project is funded to the State Government through the NEDP Scheme. The objectives for the implementation of G – PON technology are as follows:[95]

i. The primary objective of this project proposal is to improve the existing network infrastructure for providing Internet connectivity to all Government's

[94] https://msegs.in/projectdetails/28
[95] https://msegs.in/projectdetails/32

Offices, PSUs, and Societies within the State Capital and provide reliable Internet backbone connectivity to all the district headquarters.

ii. To furnish Internet/Intranet connectivity to all Government offices situated in the state and district headquarters for the efficient and effective provision of Government services to citizens.
iii. To implement robust communication infrastructure in all Government Offices utilising open standards, ensuring scalability and high-speed data, video, and voice networks.
iv. To implement dependable video conferencing infrastructure in all district headquarters, the Secretariat Complex, the Chief Minister's Office, the Chief Secretary's Offices, and other significant locations.
v. To facilitate a responsive government across all departments for the prompt resolution of grievances or applications. This will reduce the waiting time and expenses for citizens seeking various services from the state government.
vi. To equip government employees with high-speed Internet connectivity to enhance governance and improve service delivery to citizens.

Inventory Management System

It was developed in 2007 and is hosted at SDC. The aim of this project is to work for the betterment of G2G services by improving e – government infrastructure and application so as to make easy and smooth accession to information. Also, to enable efficient Inventory Management System in order to improve the decision-making system. The main objective is to create an integrated IT platform for all government departments, to use IT primarily to maximise the efficiency in management and requisition of inventory by providing tools to assist in automating the process, which would otherwise have to be performed manually. The objectives of the Inventory Management System are as follows:[96]

i. IT enabling of internal processes of the Department to increase functional efficiency.

[96] Accessed from https://msegs.in/projectdetails/38 Accessed on 04/05/2022

ii. Automation of workflow and internal processes of the Department.

iii. To provide easy access to the Department services within the department or to other government departments.

iv. To provide facilities for generation of reports both manually and automatically.

Content Management System

The CMS is a state initiative project which was started in 2014. The system is developed for all the departments under Government of Mizoram. The goal of the CMS is to provide efficiency and conveniences for all the users, be it the technical employees, citizens or any other.

The CMS aims to establish effective electronic workflow to build transparency and responsibility in the information distribution process and so reduce the workload of the departments, so enabling efficient system to inform the citizens.[97]

District Intranet Connection

The District Intranet Connection was developed in 2014 and is hosted at all district headquarter Government offices. The project is funded by North Eastern Council (NEC), Shillong and aims at providing internet connectivity to all government offices in every district headquarters. The objectives of the District Intranet Connection are as given below:[98]

i. To furnish Internet/Intranet connectivity to all Government offices situated in the district headquarters, Government Schools, Government Offices, Hospitals, and similar entities.

[97] Accessed from https://msegs.in/projectdetails/40 Accessed on 04/05/2022
[98] https://msegs.in/projectdetails/31

ii. To establish connectivity utilising open standards, scalable with a high-capacity network to transmit data, video, and voice traffic among various Government of Mizoram offices at the district level.
iii. To empower state governments to deliver diverse services to citizens effectively and efficiently, thereby reducing travel time, waiting time, and costs associated with accessing these services.
iv. To create better communication infrastructure at the district level which will have an economic impact on rural livelihoods by empowering the rural citizens and providing them with better governance and business service window as envisaged by Government of Mizoram (GoM).

E – Bharat

The project was initiated in 2014 and is hosted in Mizoram SDC. The project is funded by World Bank through MeitY. The project aims at bringing about efficient delivery of public services through electronic governance and mobile governance in the eight districts of Mizoram (Aizawl, Lunglei, Champhai, Mamit, Kolasib, Serchhip, Lawngtlai and Siaha). The main objective of this project is to provide online public service delivery deliver government services at the citizen's doorstep. The broad objectives of e-Bharat are as under:[99]

i. Reduction in departmental costs and application processing duration.
ii. Decrease in the number of intermediaries between citizens and the Government, thus enhancing transparency.
iii. The provision of 24/7 online government services accessible to all individuals from any location enables government departments to dedicate more time to effective service delivery, as the laborious data entry has already been completed, thereby enhancing their efficiency in a shorter timeframe.
iv. Assisting citizens in minimising their waiting time at the department counter while simultaneously facilitating access to services beyond standard working hours.

[99] https://msegs.in/projectdetails/27

v. The citizen and businesses can monitor the status of their service request and obtain all necessary information to access the service.
vi. Reduced costs and increased accessibility of government services for citizens.
vii. Utilisation of mobile devices to access government services as required.

Ease of Doing Business (EODB)

The project is developed in 2014 and the client of this project is Commerce & Industries Department. This project aims at helping the investors, industries and business in doing their task more easily through the help of single window clearance system.

The main objective of this project is to improve and promote the business environment for ease of doing business in the state. The other objectives of this project included the following:[100]

i. Develop and execute an online platform that enables an investor to input specific details (such as industry type, employee count, location, etc.) and receive information on all State approvals required for establishing their business or industrial unit.
ii. Establish an online Common Application Form (CAF) for all necessary clearances and approvals within a single window system.
iii. Develop and execute an online single window system featuring capabilities for online applications, payments, and approvals.
iv. Guarantee that information regarding land banks designated for industrial purposes is accessible to the public online.
v. Reduction in departmental costs and application processing duration.
vi. Reduction in the number of intermediaries between investors and the Government, thereby enhancing transparency.
vii. The provision of 24/7 online government services, accessible to all from any location, enables government departments to dedicate more time to

[100] https://msegs.in/projectdetails/34

effective service delivery, as the laborious data capture has already been completed, thus enhancing their efficiency in a shorter timeframe.

Inner Line Pass Portal

This project is developed in 2014 and the Home Department, Government of Mizoram is the client for this project. The Inner Line Pass (ILP) is a requirement from Indian citizens who are aspiring to visit Mizoram except the Government employees who are on official visit. Prior to the development of this project, recording and granting of applications were done manually, which causes a lot of inconveniences for the applicants. In order to solve this problem, MSEGS has taken the initiative to solve this issue by developing an online portal. The ILP Portal is developed with the following objectives:[101]

i. To provide and improved manual ILP system for easy and fast application delivery and prevent forging of permit.
ii. To provide easy access of Inner Line Permit application services to citizens.
iii. IT enabling of internal processes of the Department to increase functional efficiency.
iv. To facilitate the generation of reports both manually and automatically.
v. To provide more convenient, efficient and transparent services in obtaining ILP for those travellers who would like to visit Mizoram.

Interactive Digital Classroom

This project was developed in 2014 and is hosted at 20 Higher Secondary Schools across the state. This project aims at promoting Mathematics and Science in selected 20 Higher Secondary Schools through a highly equipped online platform. The project is funded by NEC, Shillong. This system of learning includes the utilisation of

[101] https://msegs.in/projectdetails/39

computer, projector and white board. The objectives for setting up the Interactive Digital Classroom includes the following: [102]

i. To provide state-of-the-art digital interactive classroom to higher secondary schools for recording, publishing video lectures and make digital knowledge repository for Mathematics and Science.

ii. To supplement conventional teaching methods for improvement of quality education system.

iii. To generate quality educational content in respect to mathematics and science subjects and disseminating the content to other schools.

iv. To enhance standardization of teaching method by improving the quality of teaching-learning processes.

v. To encourage collaboration learning through interactive mode of teaching method and better communication with other institutes.

vi. Building connectivity and knowledge network among the students and teachers across the state.

vii. To enable to share teacher among the schools through virtual classroom in which live lectures can be given to the students from other school.

State Data Center (SDC)

The project of developing the system is developed in 2014. The goal of this project is to make a secure and dependable IT infrastructure service center as they are the host and manager for the e – governance application of various department across the state. The SDC has the following objectives:[103]

[102] https://msegs.in/projectdetails/33
[103] https://msegs.in/projectdetails/26

i. To consolidate government departments services, applications, and infrastructure on a common platform and delivers them over a state wide area network.
ii. To establish a centralised data repository, ensure secure data storage, facilitate online service delivery, create a citizen information/services portal, develop a state intranet portal, implement disaster recovery measures, enable remote management, and integrate services.
iii. To facilitate efficient electronic service delivery for Government-to-Government (G2G), Government-to-Citizen (G2C), and Government-to-Business (G2B) services.
iv. Deliver a seamless, highly reliable, robust, shared, and secure data centre infrastructure to all government departments, ensuring adequate and scalable capacity for their e-governance application hosting needs.
v. Enhance operational and management oversight while reducing overall expenditures related to data management, IT administration, manpower deployment, and ancillary costs.

Right to Public Service Portal (RTPS)

The project was initiated in 2014 and is hosted at Mizoram SDC. The client for this project is Department of Personnel and Administrative Reforms. Under this project, services made under the RTPS Act, 2015 are provided in the most convenient way to the citizens online. The main objectives of RTPS includes providing improved public services to the citizen, increase transparency, public accountability and reduce corruption by imposing penalties for late and delay in service delivery.[104]

State Service Delivery Gateway & State Portal (SSDG)

This portal was developed in 2014 and is hosted at the SDC. The goal of SSDG is to provide an uninterrupted network service based on the framework of the e – governance standards to different departments in Mizoram who are using this system.

[104] https://msegs.in/projectdetails/36

The State Service Delivery Gateway & State Portal has the following objectives:[105]

i. Serve as a catalyst in facilitating the development of standards-based e-Governance applications, utilising Gateway as the middleware to ensure interoperability.
ii. Facilitate integration among Central, State, and Local Governments, thereby promoting Integrated Service Delivery and a Service-Oriented Architecture (SOA) that results in cohesive governance.
iii. Safeguard the legacy investments in software and hardware by seamlessly integrating them with various technology platforms and software implementations.
iv. Decrease the expenses of e-Governance Projects by streamlining, allocating, and enhancing the services framework.
v. Utilise PKI infrastructure for secure transactions. There is a provision for the encryption of departmental payloads to guarantee the confidentiality of departmental data. The gateway issues digital signatures and certificates to all stakeholders engaging with it for identification, authentication, and authorisation purposes. Transaction and audit logs facilitate the monitoring of governmental data.
vi. Implement transaction logging and time stamping to facilitate transaction tracking and centralised management.

Common Service Center (CSC)

This portal was developed in 2015. The goal of this project is to make the services of the Government at an easy reach of every person through the help of CSC's. The main motive of this CSC is to provide e-governance services to every corner of the state for the use of the needs. The objectives of CSC are as follows**:**[106]

i. Agriculture Services (Agriculture, Horticulture, Sericulture, Animal Husbandry, Fisheries, Veterinary)

[105] https://msegs.in/projectdetails/29
[106] https://msegs.in/projectdetails/26

ii. Education & Training Services (School, College, Vocational Education, Employment, etc.)

iii. Health Services (Telemedicine, Health Check-ups, Medicines)

iv. Rural Banking & Insurance Services (Micro-credit, Loans, Insurance)

v. Entertainment Services (Movies, Television)

vi. Utility Services (Bill Payments, Online bookings)

vii. Commercial Services (DTP, Printing, Internet Browsing, Village level BPO).

Mizoram Scholarship Portal

This portal project was initiated in 2017 and is hosted at Mizoram SDC. The goal of this project is to provide conveniences to the scholarship applicants by saving their time and application process a lot easier, speedier, transparent and effective. It enables the monitoring, analysis and delivery of the funds directly into the beneficiary account.

The objectives for setting up of the Mizoram Scholarship Portal are as follows:[107]

i. Ensure prompt distribution of scholarships to students.
ii. Establish a unified platform for diverse scholarship programs.
iii. Avoid duplication in processing.
iv. One-time Registration for student.
v. Application of Direct Benefit Transfer

Online Property Return

The Online Property Return portal project was initiated in 2017 and is hosted in Mizoram SDC. The goal of this project is to reduce the time consumption for doing the file work by Group A and Group B employees through the help of this portal. It has a built-in self – assessment system which can generate the records of previous

[107] https://msegs.in/projectdetails/37

transactions that has been made using this system. The objectives of Online Property Return are:[108]

i. To provide an online system for employees under Government of Mizoram to file all their returns.

ii. To develop a centralized repository of filed returns.

iii. Digital approval/rejection of filed returns.

iv. Notification/information dissemination using SMS and/or email.

v. Centralized MIS on officer statistics in the State.

vi. The implementation of information technology to enhance the operational efficiency of the Department's internal processes.

vii. the automation of the Department's workflow and internal processes.

viii. To provide easy access to the Department services within the department or to other government departments.

ix. To facilitate the generation of reports both manually and automatically.

x. To provide easy access to the common people the property record of every Group A & B Officer under GoM.

Thenzawl Golf Resort

The Thenzawl Golf Resort portal was developed in 2021 and is hosted at AWS. The aim for setting up this portal is to provide information for the user and provide online booking system in order to save the valuable time of the users and also to promote tourism.

[108] https://msegs.in/projectdetails/35

The main objective of this project is to provide full fledge online booking system for all facilities in Thenzawl golf resort. The objectives for creating the Thenzawl Golf Resort portal are as given below:[109]

i. The site aims to provide a glimpse into Thenzawl and all its unique locals and tourism attractions.
ii. Listing all available facilities inside Thenzawl golf course such as Eco-Log huts, Cafeteria, Open food court, Convention halls, Lounges and Golf courses.
iii. Club membership details and steps to become a member are also provided on the official site.
iv. 24x7 online booking for features including Day Passes to visit the resort, Convention halls for special occasions, Log huts for accommodations, Camera and video permissions for professional shots and videography.
v. Information on available car rental contacts who provide services all across Mizoram

The above – mentioned projects have been implemented under MSEGS, among which some of the projects have been completed while some are still going on at the moment. Although the projects that has been carried out proved to be a lot of help for the users, it has been found that the number of users has not yet reached its peak. Some of the reasons for the system being unfamiliar to the people includes lesser knowledge on the use of the system, lack of awareness on the projects, technical issues and internet connectivity problem from both parties.

2.6. Smart City Mission in Mizoram

E-Government is essential for the effective execution of SCM projects and is dependent on the digital tools and infrastructure created by Digital India. The SCM employs e-governance technologies to improve urban management and citizen involvement while taking advantage of the digital services and infrastructure that Digital India is promoting.

[109] https://msegs.in/projectdetails/42

Through the improvement of digital infrastructure and the promotion of technology breakthroughs, Digital India offers the overall framework and support for the Smart Cities Mission as well as e – governance.

Targets of Aizawl Smart City Mission

1. Promoting Aizawl Identity, Culture and Nature: Aizawl is the capital city of Mizoram which gives it distinct administrative importance. The city has all-weather multi-modal access through rail. Road and air with other parts of the country. It is a key trade gateway of the region. Aizawl has tourism potential in terms of its cultural legacy and pristine natural environment. The yearly domestic tourist footfall is more than five lakhs. Aizawl has a rich cultural legacy. Festivals and fairs are the major tourist attractions in the city. The city has historical monuments and undulating terrains which will be promoted for the tourism purposes.

2. Inclusive Society: Aizawl is a city with amalgamation of various tribes. The tangible and intangible cultural elements are prominent in the city. The smart city development has to promote this indigenous culture as the tourism interest. Various restaurants, cafes, shops, stalls will be developed to showcase the heritage items of these cultures. The social inclusion indicates development with all social groups. This includes: a) Access to all b) Institutional strengthening and reforms: The city administration efficiency and effectiveness will be enhanced through continuous reforms and devolution of powers of the 12th schedule of the Constitution (74th Constitutional Amendment Act, 1994). G2C centers shall be established and equipped with e-connectivity, efficient central data backup and secured accessibility for faster redressal of citizen issues. The safety of residents and tourists will be guaranteed through a comprehensive citywide network known as the 'public eye,' which integrates community policing with technology, installs CCTV at strategic locations, and develops e-portals for immediate incident reporting and emergency assistance. c) Affordable housing: Affordable housing will be provided for the citizens and EWS category people. This will cater to the housing demand of the citizens.

3. Economic Sustainability

a) The focus is on developing a sustainable economic environment for the available human resources in the city. The human capital can be leveraged through development of skill development centers, arranging building programmes, provision of Multi Utility Facility Centre (MUFC), Command and Control Centre, startup centre and ease of Business facilitation centers, trade facility and exhibition centers etc. this will help to generate ample amount of employment opportunities for the citizens.

b) Financial sustainability will be achieved by enhancing revenue streams, including fees and user charges, public-private partnership models, land monetisation, public infrastructure improvement charges, transfer of development rights, premiums on regulatory relaxations or additional Floor Space Index/Floor Area Ratio, vacant land taxes, land pooling systems, regularisation of structures compliant with municipal regulations, floating municipal bonds, credit ratings, and grant-in-aid. Capacity building to manage large portfolio of smart city projects. Value capture generated through smart city projects.

4. Enhancing Resilience: The primary aim of the Aizawl Smart City Mission is to fortify the city against service delivery challenges, preserve the urban environment, and improve disaster management. The augmentation of solar energy utilisation, enhancement of green cover, effective solid and liquid waste management, advocacy for rainwater harvesting, promotion of retaining walls, advancement of smart infrastructure, and establishment of disaster management facilities will render Aizawl more resilient in addressing vulnerable situations.

The key components of Aizawl Smart City include the following:

1. Enhancing a dynamic, secure, and interconnected city through urban design and improvements in landscape and mobility, including:

i. Renovations of façades in the Bara Bazar market area and enhancements to streetscapes, encompassing landscape, hardscape, signage, light poles, and bollards to support a shared street concept and prioritise pedestrian right of way.

ii. Enhancement of overall walkability and mobility in the area through the development of pedestrian walkways, improvement of carriageways, optimisation of road junctions, and implementation of smart parking solutions.
iii. Establishment of multi-utilities facilitation centres at five sites, incorporating skill development centres and facilities for citizen grievances and public amenities.
iv. Construction of a city cultural centre, sports complex, trade facility, exhibition area, skill development and incubation centre, and the development of the Aizawl Tourism Corridor. Safety and security via electronic surveillance, CCTV, trauma, and emergency services Renovation of Mizoram State Museum, Digital Library, and smart school – digital classroom (pilot program at 29 schools)

2. Enhancing urban infrastructure:

i. Potable water and wastewater collection system
ii. Provision of continuous 24/7 water supply for the entire area, inclusive of smart meters and electronic billing.
iii. Water Quality Monitoring System
iv. Uncovered underground drainage in the ABD area
v. Implementation of extensive rainwater harvesting ponds/canals
vi. Reconstruction and enhancement of the stormwater drainage system
vii. Integrated Solid Waste Management: ICT-enabled components including collection bins, community bins with RFID tags, and reverse vending machines (pilot project).
viii. Energy and Environment: Subterranean Distribution Network and
ix. Eradicating overhead networks in subterranean ducting. Installation of solar-powered LED street lighting.

In summary, the SCM employs digital capabilities to modernize urban environments and improve quality of life, while Digital India supplies the fundamental digital capabilities. E-government uses these capabilities to improve governance and service delivery.

Concluding Remark

The present chapter consisted of the growth and development of e – Governance system in Mizoram and the various projects that have been undertaken by MSeGS i.e., the nodal agency in the State. It also highlighted that e – governance had been one of the best means for attaining their goals by Smart City Mission and Digital India.

CHAPTER – III

DIGITALISATION OF GOVERNMENT OFFICES IN AIZAWL

In the last Chapter, we have seen the emergence of e – governance in Mizoram and a study on the nodal agency i.e., MSEGS and its various projects for the upliftment of various stakeholders. A general study on the projects and initiatives had been done in Chapter II and the focused will now be on the applications of the initiatives. This Chapter is divided into two parts – the first part is a study of 43 Government offices in Aizawl district in general and the second part is a specific study of selected ten (10) Government Departments in Aizawl district.

Digitalisation of work has significantly transformed the functioning of government offices, making operations faster, more efficient, and transparent. This case study looks into the implementation of Digitalisation in Aizawl, examining the uses of computers, the challenges encountered, and the impact on everyday government work. This chapter explores the benefits and obstacles of adopting technology in government services, and aims to reveal how these changes have contributed to improved governance.

Key aspects of this evaluation include the current level of digitalisation in government offices, employee awareness of digitalised systems, and the comparison between digital systems and traditional paper-based methods. The study considers important factors such as internet connectivity, the computer literacy of government employees, and the readiness of departments to adopt new technologies. It provides insights into how digitalisation has improved workflow, increased efficiency, and streamlined administrative processes within government offices.

3.1. Sampling

In order to study digitalisation of Government offices in Aizawl, 43 Government Departments were selected. These Departments had been selected as per the Department being allotted to the Councils of Ministers under Government of Mizoram. From the Universe, a convenience sampling method was used to select

samples. A total of 210 respondents completed the questionnaire. The respondents included employees from various Classes of workers i.e., Group A, B, C & D employees.

The lists of the 43 Departments are as given below:

1. Agriculture Department.
2. Animal Husbandry & Veterinary Department.
3. Art & Culture Department.
4. Commerce & Industries Department.
5. Department. of Personnel & Administrative Reforms
6. Disaster Management & Rehabilitation Department.
7. District Council & Minority Affairs Department.
8. Environment, Forests & Climate Change Department.
9. Excise & Narcotics Department.
10. Finance Department.
11. Food, Civil Supplies & Consumer Affairs Department.
12. General Administration Department.
13. Health & Family Welfare Department.
14. Higher & Technical Education Department.
15. Home Department.
16. Horticulture Department.
17. Information & Communication Technology Department.
18. Information & Public Relations Department.
19. Irrigation & Water Resources Department.
20. Co-operation Department.
21. Labour, Employment, Skill Development & Entrepreneurship Department.
22. Land Resources, Soil & Water Conservation Department.
23. Land Revenue & Settlement Department.
24. Law & Judicial Department.
25. Local Administration Department.
26. Fisheries Department.
27. Parliamentary Affairs Department.
28. Planning & Programme Implementation Department.

29. Political & Cabinet Department.
30. Power & Electricity Department.
31. Printing & Stationery Department.
32. Public Health Engineering Department.
33. Public Works Department.
34. Rural Development Department.
35. School Education Department.
36. Sericulture Department.
37. Social Welfare & Tribal Affairs Department.
38. Sports & Youth Services Department.
39. Taxation Department.
40. Tourism Department.
41. Transport Department.
42. Urban Development & Poverty Alleviation Department.
43. Vigilance Department.

3.1.1. Data Collection Instrument

The questionnaire was structured into two main sections:

1. **Respondent Profile**: This section collected basic demographic information about the respondents, including gender, age, occupation, and educational qualifications.

2. **Questionnaire**: This section was divided into multiple subsections addressing various aspects of digitalisation and digital payment systems, including:

    i. Awareness and Adoption of Digitalisation

    ii. Preferred Work Systems and Communication Modes

    iii. Impact on Government Operations

    iv. Readiness on Government Operations

    v. Challenges and Limitations

vi. Suggestions for Improvement

3.1.2. Data Analysis

A descriptive statistical analysis, a frequency analysis, and a percentage analysis were used to analyse the data that was collected. An investigation into the distribution of responses for the various categories was carried out through the use of frequency analysis.

3.1.3. Ethical Considerations

Throughout the entirety of the research project, ethical considerations were adhered to. Before taking part in the study, participants were required to give their informed consent, and their privacy and anonymity were safeguarded. The information that was gathered was utilised solely for the purpose of conducting research and was not disclosed to any outside parties.

3.2. Results & Interpretation

3.2.1. Demographic Profile of the Respondents

The sample includes 122 males (58%) and 88 females (42%). Age distribution shows a majority between 26 and 50 years, with 73 participants aged 26-35 (35%) and 74 participants aged 36-50 (35%). Participants aged 15-25 make up 1%, and those aged 51-62 account for 29%. Educationally, 13 participants (6%) have HSLC, 25 (12%) have HSSLC/PU, 4 (2%) hold diplomas, 112 (53%) have bachelor's degrees, and 57 (27.14%) have post-graduate qualifications or higher. All participants are employed in government jobs, representing 100% of the sample (Table 3.2.1).

Table 3.2.1: Demographic Profile of the Participants

Demographic Category	Subcategory	N	%
Gender	Male	122	58
	Female	88	42
Age	15 - 25	3	1
	26 - 35	73	35
	36 - 50	74	35
	51 - 62	61	29
Education	HSLC	13	6
	HSSLC/PU	25	12
	Diploma	4	2
	Bachelor's	112	53
	Post Graduate & Above	57	27
Occupation	Government Job	210	100.00

(Source: Field work)

3.2.2. Findings of the Analysis

The findings of the analysis are divided into different sections accordingly as per the structure of the questionnaire as:

3.2.2.1 Awareness and Adoption of Digitalisation

3.2.2.2 Readiness and Barriers to Implementation

3.2.2.3 Impact on Government Operations

3.2.2.4 Employee Skills and Training Needs

3.2.2.5 Usage of Digitalisation Systems

3.2.2.6 Preferred Work Systems and Communication Modes

3.2.2.7 Challenges and Limitations

3.2.2.8 Suggestions for Improvement

3.2.2.1. Awareness and Adoption of Digitalisation (Table 3.2.2.1)

Awareness of the Concept of "Digitalisation of Offices" or "Paperless Office"

Out of the people who participated in the survey, 97.6% were aware of the idea of a paperless office, which indicates that there is a high level of awareness about digitalisation among the respondents. Despite the fact that a small percentage of the workforce (1.4%) is still unaware of digital office systems, demonstrates that there is a widespread knowledge of these systems among the workforce. One percent of people choose not to reveal their level of awareness.

Mode of Office Work

Furthermore, 63.3% of the participants reported that they still primarily use traditional paperwork, while 36.6% of them reported that they adopt a hybrid model, which combines digital and paper methods. This is despite the fact that the participants have a high level of awareness. This demonstrates that although the idea of digitalisation is widely known, that it has not yet been fully adopted due to the inertia that exists in both culture and operations.

Start of Digitalisation or Paperless System

There are significant gaps in actual adoption, as evidenced by the fact that 41% of office workers have reported having begun some form of digitalisation, while 30% have not implemented any such change. Twenty – nine (29%) percent of those who participated in the survey expressed a desire to conceal the current state of their digitalisation or paperless system implementation.

Plans for the Use of Digitalisation in Office Work

There is a widespread intention to adopt digital systems, as evidenced by the fact that almost all respondents (99%) reported that there is a plan for digitalisation. However, due to the many obstacles that must be overcome, the mere existence of plans does not necessarily guarantee that they will be successfully implemented.

Table 3.2.2.1: Awareness and Adoption of Digitalisation

Question	Responses	Percentage	Count
Awareness of "Digitalisation of Offices" or "Paperless Office"	Aware	97.60	205
	Not aware	1.40	3
	No response	1.00	2
Mode of Office Work	Traditional (Paper-based)	63.30	133
	Paperless	-	-
	Hybrid	36.60	77
Start of Digitalisation or Paperless System	Yes	41	86
	No	30	63
	No response	29	61
Plans for Use of Digitalisation	Yes	99	208
	No response	1	2

(Source: Field work)

3.2.2.2. Readiness and Barriers to Implementation (Table 3.2.2.2)

Reasons for Non – Implementation

According to the participants, the most important reasons for the slow adoption of digitalisation are the following: delayed implementation (21.9%), departmental priority issues (19%), poor facilities (10.5%), and a lack of computer skills (3.3%). A sizeable 45.2% of respondents did not disclose the reasons for their decision, which indicates that there may be sensitive internal factors that contributed to their decision to not report.

Internet Connectivity in the Office

The majority of respondents, or 99%, stated that they had internet connectivity, which is an essential component for the successful implementation of digital transformation. It is clear that there is a significant barrier that needs to be addressed as soon as possible because one percent of them have reported that they do not have access to the internet.

Government Awareness to Fully Adopt Computer Systems

When it comes to the question of whether or not the government is fully aware of the necessity of digital adoption, the opinions of the respondents are divided. 51.9% of the respondents believe that there is a lack of awareness, while 48.1% of the respondents reported that there is awareness. In light of this, it appears that there is a gap between the strategic recognition of the benefits of digitalisation and the actionable understanding that is required to drive comprehensive change among the respondents.

Reduction of Paper Consumption Through Digitalisation

61.4% of respondents are of the opinion that digitalisation minimises the use of paper, while 29% are of the opposite opinion. This may suggest that rather than completely digitising the processes, it may be more recommended to continue using traditional paper methods as an alternative rather than completely replacing them. This is because the use of paper methods is more expensive than digitalisation.

Table 3.2.2.2: Readiness and Barriers to Implementation

Question	Responses	Percentage	Count
Reasons for Non-Implementation	Delayed Implementation	21.90	46
	Departmental Priorities	19	40
	Poor Facilities	10.50	22
	Lack of Skills	3.30	7
	No response	45.20	95
Internet Connectivity in the Office	Yes	99	208
	No	1	2
Government Awareness of Full Adoption	Yes	48.10	101
	No	51.90	109
Reduction of Paper Consumption	Yes	61.40	129
	No	29	61
	No response	9.60	20

(Source: Field work)

3.2.2.3. Impact on Government Operations (Table 3.2.2.3)

Perceived Helpfulness of Digitalisation in Daily Government Work

The fact that the vast majority of people (94.3% of them) believe that digitalisation is beneficial to daily work demonstrates that the digitalisation of works may improve the efficiency and workflow management in business operations within the government. There was only a small percentage of people who disagreed, which indicates that there is limited resistance to adopting digital systems.

Capability of the Government of Mizoram to Use the System in Daily Functioning

Eighty percent of those who participated in the survey are of the opinion that the government is not yet capable of fully integrating digitalised systems into day-to-day practices. This perception reflects critical gaps in either leadership or infrastructure, or both, which limit the effectiveness of efforts to digitalise certain aspects of the organisation.

Does Digitalisation Bring Transparency in Department Work?

In the survey, 80% of the respondents believe that digital systems increase transparency, while 13.8% believe that this goal is only partially achieved. This indicates that digitalisation is seen as a tool for enhancing openness and accountability in the work of the government, despite the fact that it may require additional reforms in order to fully realise these benefits.

Does It Make the Government More Accountable to People?

73% of respondents believe that digitalisation enhances government accountability to some degree, with 23% firmly confirming disbelief. It is possible that this indicates that the capability of digital systems to generate records that can be traced and to improve service delivery is acknowledged, although there is still room for an even wider acceptance.

Does Digitalisation Increase Website Visitors?

Approximately 47.6% of those who participated in the survey are of the opinion that digitalisation has resulted in an increase in the number of people visiting websites. 8.6% of people, on the other hand, believe that it has not had this intended effect. In the meantime, 43.8% of respondents decided not to share their thoughts on the matter. It is possible that digital advancements are having a positive impact in certain areas, as indicated by the fact that nearly half of the respondents believe that digitalisation increases website traffic. On the other hand, the 8.6% of respondents who disagree and the 43.8% who are unsure point to a more complicated reality in which the effects of digitalisation on website visitors are not universally felt or recognised.

Table 3.2.2.3: Impact on Government Operations

Question	Responses	Percentage	Count
Helpfulness of Digitalisation in Daily Work	Helpful	94.30	198
	Not Helpful	1.40	3
	No response	4.30	9
Capability to Use the System in Daily Functioning	Yes	20	42
	No	80	168
Transparency in Department Work	Yes	80	168
	To Some Extent	13.80	29
	No	3.80	8
	No response	2.40	5
Government Accountability	Yes, to some extent	73.30	154
	Yes	23.30	49
	No	2.40	5
	Not applicable	1	2
Does Digitalisation Increase Website Visitors?	Yes	47.60	100
	No	8.60	18
	No response	43.80	92

(Source: Field Work)

3.2.2.4. Employee Skills and Training Needs (Table 3.2.2.4)

Working Knowledge of Computers

89.5% of respondents stated that they possessed fundamental computer skills, while 9.5% of respondents did not possess such knowledge. This indicates that there is a training gap that needs to be addressed. A group that is either unsure of their capabilities or unwilling to disclose their limitations could be represented by the one percent of people who chose not to respond.

Required Computer Qualifications as Demanded by the Government

The necessary qualifications were met by 69% of the respondents, but a concerning 30.5% of them did not meet them. This demonstrates that there is a requirement for additional training and certification programs among the respondents in order to guarantee that workers are able to fulfil the requirements set forth by the government regarding the use of computers.

Will You Be Able to Operate a computer if Required by Authorities?

In a situation where they were required to use computers, 81.9% of respondents felt confident in their ability to do so, while 10.5% indicated that they would have difficulty doing so. Consequently, this provides additional evidence that targeted training initiatives are necessary in order to improve workforce readiness, as was mentioned earlier.

Does the System Make Workers More Efficient?

81% of respondents believe the system enhances worker efficiency, indicating a strong consensus on its positive impact on productivity. In contrast, only 3.30% feel it does not improve efficiency, which show that there may be some areas in digitisation of payment that needs attention to improve the system. The 15.70% of non-responses could imply uncertainty or lack of familiarity with the system's effects.

Table 3.2.2.4: Employee Skills and Training Needs

Question	Responses	Percentage	Count
Working Knowledge of Computers	Yes	89.50	188
	No	9.50	20
	No response	1	2
Required Computer Qualifications	Yes	69	145
	No	30.50	64
	No response	0.50	1
Ability to Operate Computers When Required	Confident	81.90	172
	Struggle	10.50	22
	No response	7.60	16
Does the System Make Workers More Efficient?	Yes	81	170
	No	3.30	7
	No response	15.70	33

(Source: Field Work)

3.2.2.5. Usage of Digitalisation Systems (Table 3.2.2.5)

Is There Government Pressure to Use the System?

The fact that 54.3% of respondents said they were not under any pressure to use digitalised systems suggests that adoption is currently more voluntary than something that is mandatory. But 35.2% of respondents reported feeling some level of pressure, which suggests that there is a gradual push towards modernising financial procedures.

Advantages of Using the System

The fact that 66.2% of respondents acknowledged the effectiveness and convenience of digital mode of record keeping is evidence of the positive impact that these systems have. Improved record-keeping and increased transparency were two additional benefits that were mentioned.

Does Digitalisation Improve Website Maintenance?

84.8% of respondents believe that digitalisation makes website maintenance easier, which reflects improved capabilities in managing online content and resources. This exemplifies the primary benefit that can be gained from incorporating digital tools into routine operations.

Table 3.2.2.5: Usage of Digital Payment Systems

Question	Responses	Percentage	Count
Government Pressure to Use the System	No	54.30	114
	Yes, Some Pressure	35.20	74
	No response	10.50	22
Advantages of Using the System	Efficiency and Convenience	66.20	139
	Other Benefits	22.90	48
	No response	11	23
Improvement in Website Maintenance	Yes	84.80	178
	More or Less	9	19
	No	3.30	7
	No response	2.90	6

(Source: Field work)

3.2.2.6. Preferred Work Systems and Communication Modes (Table 3.2.2.6)

Preferred System of Work

There is a clear tendency towards digital methods, as indicated by the fact that 66.7% of respondents indicated a preference for paperless systems. Despite this, 21.9% of respondents claimed that they still preferred traditional paper, which suggests that a sizeable minority continues to be resistant to change.

How Do You Initiate Business with Other Departments?

When it comes to communication between departments, nearly half of the respondents (49.5% of them) continue to rely on paper, while 48.6% of them use a combination of

paper and digital methods. The evidence suggests that the transition to digital communication is occurring gradually but not yet fully.

Applications/Software Mostly Used for Office Work

Microsoft Excel (47.1%) and Microsoft Word (25.2%) were the applications that were used the most frequently, which indicates a dependence on standard office productivity tools. Other specialised or custom software was also utilised, which indicates that there may be a requirement for the utilisation of additional software in the future, which is something that must be taken into consideration.

Table 3.2.2.6: Preferred Work Systems and Communication Modes

Question	Responses	Percentage	Count
Preferred System of Work	Paperless	66.70	140
	Paper	21.90	46
	Hybrid	11	23
	Not applicable	0.50	1
Mode of Communication	Paper	49.50	104
	Both Paper and Digital	48.60	102
	Other	1.90	4
Most Used Applications	MS Excel	47.10	99
	MS Word	25.20	53
	Other Software	27.60	58

(Source: Field Work)

3.2.2.7. Challenges and Limitations (Table 3.2.2.7)

Reasons for the Slow Progress of Digitalisation in Government Offices

Respondents brought up a number of obstacles that stand in the way of widespread adoption of digital technology, such as a lack of awareness (30%), inadequate infrastructure (23.8%), and other reasons that were not specified (42.4%).

Disadvantages of the System

Concerns about security, technical issues (20%), and a lack of technical skills (11.9%) were cited by the respondents as significant disadvantages of the system that is currently in place. It is possible that these individuals may have reluctance or a lack of confidence in the system's reliability, as indicated by the fact that a significant percentage of respondents, 51.4%, preferred not to comment.

Estimated Time for Workers to Be Well-Versed in Digitalisation

50.5% of those who participated in the survey expressed scepticism, stating that they believed it was possible that workers would never become fully proficient with digitalised systems. It is possible that this lack of confidence is an indication that employees working in government offices require ongoing training and support.

Table 3.2.2.7: Challenges and Limitations

Question	Responses	Percentage	Count
Barriers to Digital Adoption	Other Reasons	42.40	89
	Lack of Awareness	30	63
	Poor Infrastructure	23.80	50
Disadvantages of the System	Security/Technical Issues	20	42
	Lack of Skills	11.90	25
	No response	51.40	108
Time for Workers to Be Well-Versed	Never	50.50	106
	Uncertain	38.10	80
	With Training	11.40	24

(Source: Field Work)

3.2.2.8. Suggestions for Improvement

Measures to Popularise System Use

For the purpose of increasing system adoption, the most popular suggestion was to conduct mass awareness campaigns (50.5%), followed by the suggestion to improve facilities (31.4%). For the purpose of supporting digital transformation, this

demonstrates that there is a requirement for investments in both education and infrastructure.

Suggestions to Increase System Use

One of the suggestions made by participants was to provide resources (31.4%) and training (20.5%) in order to increase adoption. In addition, recommendations were made regarding the modification of policies and the enhancement of user assistance, which indicated the requirement for comprehensive strategies to overcome obstacles.

Who Is Necessary for Successful Implementation?

It is important to note that 47.1% of respondents acknowledged that government officials are necessary for effective implementation, which highlights the importance of leadership and policy endorsement. Observations were made regarding the roles of workers (17.1%) and additional factors (23.8%), which demonstrates the intricate nature of successful digital adoption and calls for further investigation.

Table 3.2.2. 8: Suggestions for Improvement

Question	Responses	Percentage	Count
Measures to Popularise System Use	Mass Awareness	50.50	106
	Provide Facilities	31.40	66
	Other Measures	18.10	38
Suggestions to Increase System Use	Provide Resources	31.40	66
	Training	20.50	43
	Other Suggestions	29	61
	No response	19	40
Necessary for Successful Implementation	Government Officials	47.10	99
	Workers	17.10	36
	Other Factors	23.80	50
	No response	11.90	25

(*Source*: *Field Work***)**

3.2.2.9 Result Analysis

1. Awareness of the Concept of "Digitalisation of Offices" or "Paperless Office"

It is indicative of a high level of knowledge about contemporary technological advancements in office settings that 97.6% of respondents are aware of digitalisation or paperless offices. The fact that this finding was made indicates that, at the very least on a conceptual level, the concept of transitioning to digital or paperless systems has reached almost all of the participants. There is a possibility that the remaining respondents, who make up 1.4% of the total, are not familiar with the concept. This could be because they are either not directly involved in office technology systems or have had limited exposure to conversations about digital transformation.

A larger sentiment of resistance or disengagement from the conversation surrounding technological changes in offices may be reflected in the fact that one percent of respondents chose not to disclose their awareness. This could be an indication of either uncertainty or unwillingness to engage.

2. Mode of Office Work

Despite the high level of awareness regarding digitalisation, there is a significant gap in its adoption, as indicated by the fact that a significant portion of respondents, which accounts for 63.3% of the total, continue to rely primarily on traditional paperwork. It's possible that many offices are still stuck with paper-based systems because of organisational resistance, difficulties with infrastructure, or simply because the comfort and familiarity of using paper prevents them from switching.

There is a hybrid model of working that suggests some degree of transition, as indicated by the fact that 36.6% of respondents use a combination of paper and computer systems. A number of offices are beginning to implement digital systems alongside traditional methods, possibly as a compromise solution. This highlights the fact that paper is still the predominant method of communication in many offices.

3. Start of Digitalisation or Paperless System

According to the survey, although 41% of offices have started the process of implementing a digitalised system, a significant proportion of them (30%) have not yet gone through with it. Based on this disparity, it appears that even though there may be an awareness of the benefits of digitalisation, many organisations are still facing obstacles that prevent them from fully implementing it. The presence of these obstacles may include financial constraints, a deficiency in personnel with the necessary skills, or an inadequate technical infrastructure.

The fact that 29% of organisations chose not to disclose their implementation status may be an indication of uncertainty within those organisations, where there may be discussions about digital transformation but no concrete actions have yet been taken. On the other hand, it might be an indication of a reluctance to disclose the fact that progress has been limited.

4. Reasons for Non – Implementation

There are a variety of reasons why a digitalised or paperless system is not implemented; however, the most common reason, which accounts for 21.9% of all cases, is delays or non-implementation. This could be the result of a lack of initiative on the part of the leadership, or it could be due to the prioritisation of other projects. On top of that, 19% of respondents mentioned departmental priority issues, which suggests that management might not consider digitalisation to be an immediate necessity. This is especially true if traditional methods are still considered to be functional.

More than ten percent of respondents (10.5%) brought up the issue of inadequate facilities, which further highlights the logistical challenges that could potentially impede implementation. This could be a reference to computer systems that are no longer supported, a lack of internet connectivity, or an inadequate number of workspaces to accommodate digital work.

Despite the fact that it is a less frequently mentioned problem, a lack of computer skills (3.3%) continues to be an important factor. The adoption of digitalised systems would be delayed or ineffective if employees did not possess the necessary skills to operate computers in an efficient manner. This makes it abundantly clear that initiatives aimed at capacity-building and training are required.

It is possible that the large percentage of employees (45.2% of the total) who chose not to disclose the reason could be a result of a combination of sensitive internal factors. These factors could include anything from ineffective leadership to a reluctance to acknowledge operational shortcomings.

5. Plans for the Use of Digitalisation in Office Work

Despite the fact that the implementation of digitalisation may be slow, the majority of organisations recognise its significance, as evidenced by the nearly unanimous response (99%) that there is a plan for digitalisation. It is clear from the existence of a plan that the digitalisation of the office is not a question of whether it will be implemented, but rather when and how it will be implemented.

On the other hand, the mere existence of a plan does not ensure that it will be carried out without any problems. Despite the existence of formal plans, there are still instances in which issues such as infrastructure, skills, and organisational priorities can impede progress. This is demonstrated by the questions that came before.

6. Internet Connectivity in the Office

An encouraging sign for digital transformation is the fact that almost all of the respondents (99%) reported having internet connectivity. Access to the Internet is essential for the implementation of digitalised systems because it enables access to cloud storage, digital communication tools, and platforms for real-time collaboration.

The one percent of people who do not have access to the internet constitutes a barrier that needs to be addressed. In the modern digital world, not only does a lack of internet

access result in a slower implementation, but it also results in the exclusion of some of the more extensive benefits of digital transformation.

7. Working Knowledge of Computers

The fact that 89.5% of respondents have a working knowledge of computers is encouraging for the future of digitalisation in the workplace. I hope this trend continues. It gives the impression that the majority of the labour force already possesses the fundamental abilities that are required to participate in administrative work that is digital.

On the other hand, the fact that 9.5% of employees lacked working knowledge and that 1% of employees chose not to comment indicates that a certain group of workers might require specialised training. One example of this would be the implementation of specialised training programs for employees who are older or who hold positions that have traditionally relied less on digital technology.

8. Required Computer Qualifications as Demanded by the Government

The fact that a sizeable 69% of respondents have the qualifications required to fulfil the digitalisation requirements set forth by the government is indicative of the fact that a sizeable portion of the workforce has been formally trained to make use of office technology.

On the other hand, it is concerning that 35% of the respondents do not possess the necessary qualifications. Furthermore, it indicates that a significant number of workers are not yet fully prepared or certified to work in an office environment that is fully digitalised, despite the fact that there are plans for implementation and awareness of the situation. In light of this, it is imperative that continued investments be made in formal training programs and upskilling opportunities.

The following chart shows the status of workers having the currently demanded computer qualifications

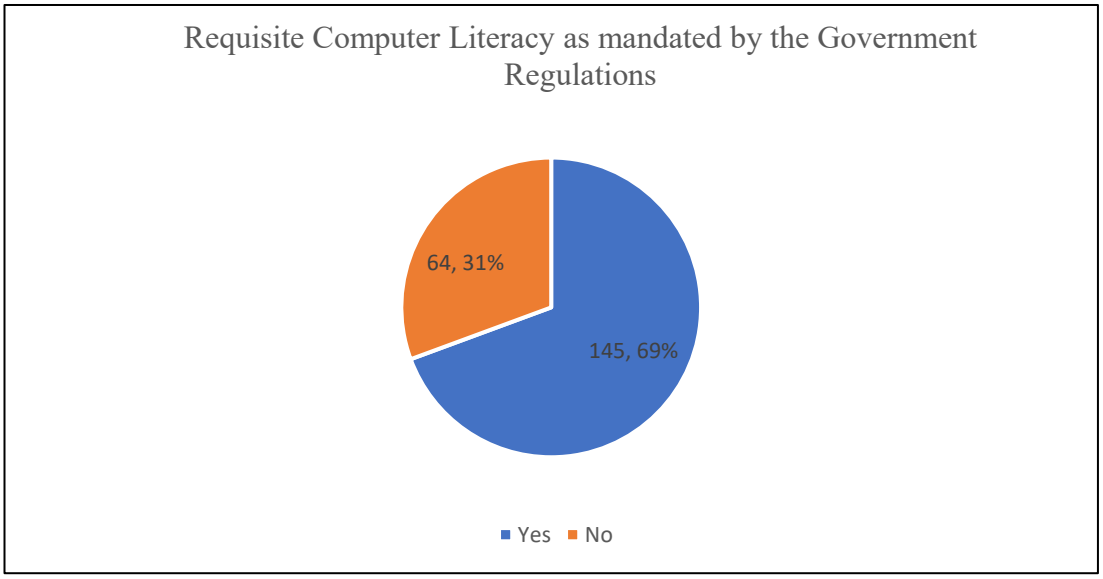


Figure 1: Requisite Computer Literacy as mandated by the Government Regulations

9. Perceived Helpfulness of Digitalisation in Daily Government Work

The fact that the vast majority of respondents (94.3% percent) are of the opinion that digitalisation would be beneficial in the day-to-day operations of the government is a strong indicator of the positive sentiment that exists regarding digital transformation. Taking this into consideration, it appears that the majority of respondents are aware of the potential benefits of adopting a digital system, which include increased efficiency, enhanced workflow management, and time savings.

The small percentage of individuals who hold dissenting opinions (1.4%) and those who did not respond (4.3%) are likely to represent groups that are either sceptical of the technology's ability to be applied to their particular roles or are reluctant to accept change.

10. Capability of the Government of Mizoram to Use the System in Daily Functioning

Approximately 80% of those who participated in the survey are of the opinion that the government of Mizoram is not yet able to fully implement a digitalised system in its day-to-day operations. There is a significant chasm that is highlighted by the disparity between the widespread belief in the usefulness of digitalisation and the perceived lack of capability.

One possible explanation for this gap is that it is caused by problems such as inadequate infrastructure, excessive bureaucratic red tape, or insufficient support from leadership. It is also possible that this sentiment is a reflection of a lack of confidence in the government's ability to carry out the implementation, possibly as a result of previous failures in initiatives that are comparable.

11. Government Awareness to Fully Adopt Computer Systems

Regarding the question of whether or not the government possesses sufficient awareness to fully adopt computer systems, there is a division of opinion. While 51.9% of people believe that the government does not have enough awareness, 39.5% of people believe that there is enough awareness.

Those who believe that there is a lack of awareness may be bringing attention to the significance of the leadership of the government in not only acknowledging the necessity of digitalisation but also actively promoting it through the implementation of policies, the provision of training, and the investment in infrastructure. It is possible that this is a reflection of the perception that the government, despite being aware of the concept, has not yet fully understood or embraced the steps that are required for comprehensive adoption.

12. Reduction of Paper Consumption Through Digitalisation

61.4% of respondents are of the opinion that digitalisation causes a reduction in the amount of paper that is consumed, which is one of the primary goals of adopting a

paperless system. On the other hand, 29% of respondents are of the opposite opinion, which suggests that the consumption of paper continues to be high despite the introduction of computers.

This discrepancy suggests that although digital tools may be utilised, it is possible that they are not completely replacing the practice of using traditional paper methods. It's possible that offices are using both at the same time, or that they are encountering challenges in completely eliminating paper due to the requirements of legal or procedural regulations.

13. Will you be able to operate a Computer if insisted by authorities?

There is a general level of confidence in computer literacy or at the very least a willingness to learn, as evidenced by the fact that 81.9% of respondents believe they would be able to operate a computer if it were required of them by authorities.

In response to the survey, 10.5% of respondents stated that they would not be able to operate a computer. This indicates that there is still a sizeable portion of the labour force that is either unprepared or does not possess the requirements.

A total of 7.6% of respondents indicated that they would rather not answer, which may be an indication of reluctance, uncertainty, or a lack of engagement with the concept of mandatory computer use.

14. Reasons for the Slow Progress of Computer Use in Government Offices

It is possible that a wide range of factors, including a lack of leadership, inadequate policies, or department-specific challenges, are contributing to the slow progress of computer use, as 42.4% of respondents cited other reasons for the slow progress.

A lack of awareness was cited by 30% of respondents, which suggests that a significant number of workers may not fully comprehend the advantages or significance of digital transformation.

23.8% of respondents identified inadequate infrastructure as a significant obstacle, most likely referring to unreliable internet connections, obsolete equipment, or an inadequate amount of technological resources.

There was a preference among 3.8% of respondents to not state a reason, which may indicate a lack of interest or a reluctance to criticise the system.

15. Is It Necessary to Implement Digitalisation in All Government Offices?

There is a strong consensus on the significance of modernising government operations, as evidenced by the fact that 91.4% of respondents believe that it is necessary to implement digitalisation across all government offices.

Due to the fact that only 1.9% of respondents believed it was not required, it appears that resistance to digitalisation is relatively low.

6.7% of respondents indicated that they would rather not say, which may be an indication of uncertainty regarding the extent or feasibility of full-scale implementation.

16. Who Is Necessary for Successful Implementation?

Of those who participated in the survey, 47.1% believe that government officials are the most important factor in ensuring successful implementation, highlighting the importance of leadership and policymakers in driving digital transformation. Workers were cited as essential by 17.1% of respondents, indicating that the success of the system is also dependent on the workforce's willingness and ability to adopt new technologies.

23.8% of respondents mentioned other factors, most likely referring to a combination of government officials and workers, as well as possibly additional IT support or third-party consultants. The fact that 11.9% of respondents chose not to answer may be indicative of a lack of knowledge or confidence regarding the individuals who should be responsible for project implementation.

17. Preferred System of Work

A clear preference for digital workflows was indicated by the fact that 66.7% of respondents preferred a paperless system. This preference is clear once appropriate systems are in place.

A resistance to change, comfort with traditional methods, or doubts about the efficiency of the paperless system are all possible explanations for the fact that 21.9% of respondents still preferred paper alternatives.

There is evidence that some respondents see value in a hybrid approach, at least during the transition phase, as evidenced by the fact that 11% of respondents preferred both paper and digital systems.

A total of 0.5 percent of respondents decided that the question was irrelevant, which suggests that they do not deal with workflows that would be impacted by such changes.

The following chart shows the preference of the workers for doing daily works

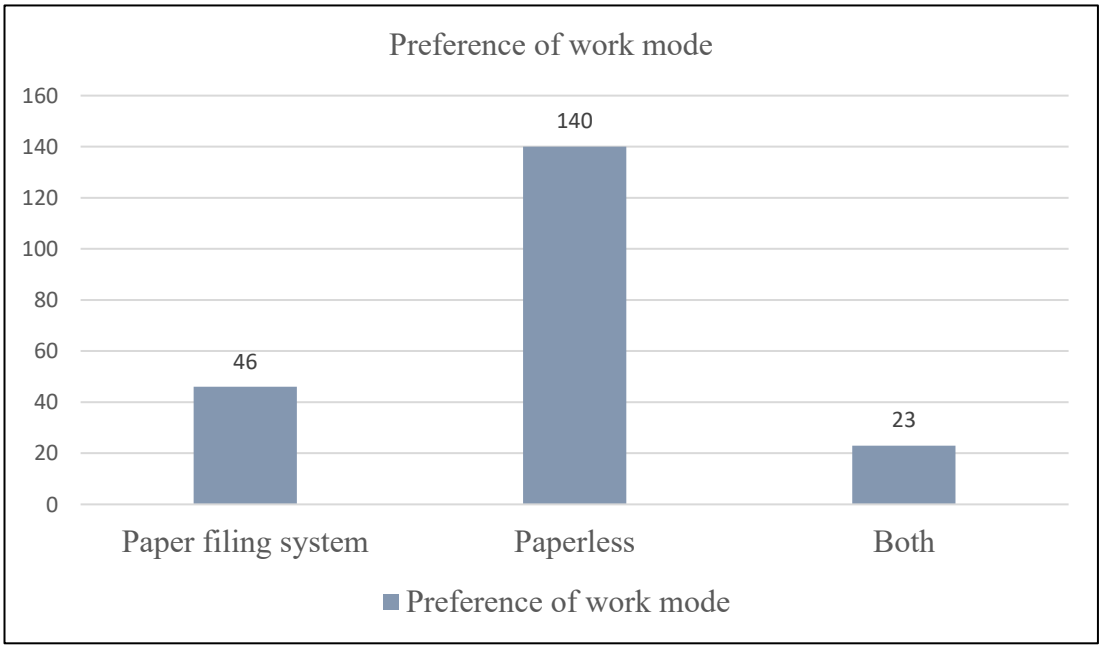


Figure 2: Column chart showing the preference of work by the respondents

18. How Do You Initiate Business with Other Departments?

The responses were almost evenly split, with 49.5% of respondents using paper to initiate business with other departments and 48.6% using both paper and electronic means. This indicates that the majority of offices continue to rely heavily on paper.

Other methods, which may include fully digital processes or other specialised systems, are utilised by only 1.9% of the population.

This nearly even split suggests that traditional paper-based communication is still widely used, particularly in dealings between departments, despite the fact that modern digitalisation has made significant strides in recent years.

19. Applications/Software Mostly Used for Office Work

According to 47.1% of respondents, Microsoft Excel is the application that is used the most frequently. This is probably because of the versatility it possesses in terms of managing data and spreadsheets.

MS Word was cited by 25.2% of respondents, indicating its significance for the creation and editing of documents.

A diverse digital toolkit is present in government offices, as evidenced by the fact that 27.6% of respondents mentioned other software. This could include government-specific applications, custom programs, or alternative resources for increasing productivity.

20. Estimated Time for Workers to Be Well-Versed in Digitalisation

A significant lack of confidence in the training and resources that are currently available is indicated by the fact that the majority of respondents, fifty-five percent, was of the opinion that workers would most likely never become fully proficient in digitalisation.
38.1% of respondents were unsure and selected "cannot say," which is reflective of

the general uncertainty regarding the efficiency of training programs and the rate at which they are developed and implemented.

There is a minority of people who believe that proper training is the key to full proficiency, as evidenced by the fact that 11.4% of workers believed that workers would become competent depending on training.

21. Measures to Popularise System Use

The need to increase understanding and acceptance of digitalisation across all levels of government was brought to light by the fact that fifty-five percent of respondents suggested mass awareness campaigns to popularise system use.

A total of 31.4% of respondents suggested the provision of adequate facilities, which reflects the requirement for improved infrastructure, including hardware, software, and internet connectivity, in order to facilitate a more seamless transition to digital.

It was mentioned by 18.1% that there are additional measures that could be taken to encourage a wider use of the system. These measures could include incentives, changes in policy, or IT support services.

22. Does Digitalisation Bring Transparency in Department Work?

80% of respondents are of the opinion that digitalisation makes departmental work more transparent, which indicates that there is strong support for the concept that digital systems help reduce corruption, make processes more open, and improve accountability.

Even though digitalisation is helpful, it may not be enough to completely resolve transparency issues without other structural reforms. This is indicated by the fact that 13.8% of respondents said that it brings transparency up to some extent.

It is possible that concerns about data manipulation or poor implementation led to the belief that 3.8% of respondents did not believe that digitalisation brings transparency. There were 2.4% who chose not to say.

23. Does It Make the Government More Accountable to People?

It is suggested that the majority of respondents perceive at least some level of increased accountability as a result of digital records, tracking, and open access. Seventy-three percent of respondents stated that digitalisation makes the government more or less accountable to the people.

A total of 23.3% of respondents gave a positive response, indicating that they are firmly of the opinion that digitalisation directly enhances government accountability. 2.4% of respondents did not believe that it leads to increased accountability, and 1% of respondents didn't find it applicable to their work.

24. Does Digitalisation Improve Website Maintenance?

It is clear that digital systems can help streamline and automate tasks related to updating and managing online platforms, as evidenced by the fact that 84.8% of respondents believe that digitalisation improves website maintenance. In other words, they see some benefits, but they might not find them to be substantial. Nine percent of people felt that it improves it more or less.

3.3% of respondents stated that it does not improve website maintenance, which may be an indication of poor implementation, outdated systems, or a lack of skilled personnel.

Only 2.9% of respondents chose not to answer.

25. Does It Increase Website Visitors?

47.6% of people believe that digitalisation leads to an increase in website visitors, which demonstrates that digital systems make it easier for the general public to access information and services.

The fact that 43.8% of respondents chose not to answer may indicate that a significant number of respondents are either uncertain or do not directly track website metrics.

There is a lack of public awareness of online services or limited internet access among the population, which may be the reason why 8.6% of people believe that it does not increase the number of visitors.

26. Does the System Make Workers More Efficient?

81% of respondents believe that the system makes workers more efficient, which suggests that digital tools help streamline processes, reduce the number of tasks that are redundant, and speed up operations.

It is possible that some employees do not directly engage with the system or are unsure of the benefits it offers, as indicated by the fact that 15.7% of respondents preferred not to say.

It is likely that technical issues, a lack of skills, or resistance to adopting new methods are the reasons why 3.3% of workers believe that the system does not make workers more efficient on the job.

27. Is There Government Pressure to Use the System?

Over 54.3% of those who participated in the survey stated that they had not received any pressure from the government to use the electronic payment system. This suggests that even though the system is available, its utilisation may not be strictly mandated. On the other hand, a sizeable proportion of respondents (35.2% of them) admitted to experiencing some level of pressure to adopt the system, which indicates that there is a push towards modernisation in certain domains. One possible explanation for the remaining 10.5% of respondents who chose not to answer is that they are either uncertain or reluctant to reveal their point of view.

28. Advantages of Using the System

62% of those who participated in the survey identified the system's primary advantages as being its efficiency and convenience. The fact that this is the case demonstrates the beneficial effects that electronic payments have on the simplification of procedures and the reduction of the amount of time needed for financial transactions. 22.9% of

respondents mentioned additional advantages, which may include enhanced transparency, cost reductions, and improved record-keeping. However, eleven percent of respondents indicated that they would rather not share their opinions, which may be a reflection of a lack of direct experience or comprehension of the system.

29. Disadvantages of the System

20% of respondents mentioned that they were concerned about security and technical issues, which highlights their worries about the reliability of the system and the safety of their data. Furthermore, 11.9% of respondents described a lack of technical skills as a barrier, which indicates that there is a requirement for more comprehensive training programs. Other potential drawbacks, which were mentioned by 16.7% of respondents, may include resistance to change, instability in the network, or problems with system integration. 51.4% of those who participated in the survey expressed a preference to remain silent, which may be an indication of either a lack of familiarity with the system or a reluctance to openly criticise it.

30. Suggestions to Increase System Use

There was a suggestion made by respondents that adequate resources (31.4%) and training (20.5%) should be provided in order to increase the adoption of digitalisation systems. At the same time that the call for training reflects the demand for capacity-building initiatives, the emphasis on resources indicates that there is a need for improved infrastructure, such as dependable internet connectivity and software that has been updated. Other suggestions, which account for 29% of the total, could include revisions to the policies, enhancements to the user support, or incentives for using the system. The 19% of respondents who chose not to respond may be indicating that they are content with the current configuration or that they are uncertain about the possibilities for improvement.

Table 3.2.2: Responses of the Participants

Question	Response	N	%
1. Have you heard of the concept " Digitalisation of Offices" or "Paperless Office?"	No	3	1.4
	Yes	205	97.6
	Prefer not to say	2	1
2. The office work of the Department has been carried out through	Both Paper and Computer	77	36.6
	Paper Work	133	63.3
	Paperless	0	0
	Not Applicable	0	0
3. When do you start using the digitalisation of offices or paperless system?	Various timeframes and methods	86	41
	Haven't started	63	30
	Prefer not to say	61	29
4. Reasons for the system not being implemented	Lack of Computer Skills	7	3.3
	Poor Facilities	22	10.5
	Department Priority Issues	40	19
	Other/Not Implemented Yet	46	21.9
	Prefer not to say	95	45.2

5. Is there any plan on the use of digitalisation of Office work?	No	1	0.5
	Yes	208	99
	Prefer not to say	1	0.5
6. Is internet connectivity available in the office?	No	2	1
	Yes	208	99
	Not Applicable	0	0
7. Do you have a working knowledge of computers?	No	20	9.5
	Yes	188	89.5
	Prefer not to say	2	1
8. Do you have the required computer qualifications as demanded by the Government?	No	64	30.5
	Yes	145	69
	Prefer not to say	1	0.5
9. Do you think it will be helpful in daily government work?	No	3	1.4
	Yes	198	94.3
	Prefer not to say	9	4.3
10. Is the Government of Mizoram capable of using the system in its daily functioning?	No	168	80
	Yes	41	19.5
	Prefer not to say	1	0.5
11. Does the Government have enough awareness to fully adopt computer systems?	No	109	51.9
	Yes	83	39.5

	Prefer not to say	18	8.6
12. Does digitalisation reduce paper consumption?	No	61	29
	Yes	129	61.4
	Prefer not to say	20	9.5
13. Will you be able to operate a computer if required by authorities?	No	22	10.5
	Yes	172	81.9
	Prefer not to say	16	7.6
14. Reasons for slow progress of computer use in government offices	Poor Infrastructure	50	23.8
	Lack of Awareness	63	30
	Other	89	42.4
	Prefer not to say	8	3.8
15. Is it necessary to implement digitalisation in all government offices?	No	4	1.9
	Yes	192	91.4
	Prefer not to say	14	6.7
16. Who is necessary for successful implementation?	Government Officials	99	47.1
	Workers	36	17.1
	Other	50	23.8
	Prefer not to say	25	11.9
17. Preferred system of work	Paper	46	21.9
	Paperless	140	66.7

	Both	23	11
	Not Applicable	1	0.5
18. How do you initiate business with other departments?	Paper	104	49.5
	Paper and Electronic	102	48.6
	Other	4	1.9
19. Applications/software mostly used for office work	MS Excel	99	47.1
	MS Word	53	25.2
	Other	58	27.6
20. Estimated time for workers to be well-versed in digitalisation	Most Probably Never	106	50.5
	Depends on Training	24	11.4
	Cannot Say	80	38.1
21. Measures to popularise system use	Mass Awareness	106	50.5
	Providing Adequate Facilities	66	31.4
	Other	38	18.1
22. Does digitalisation bring transparency in department work?	No	8	3.8
	Yes	168	80
	Upto Some Extent	29	13.8
	Prefer not to say	5	2.4

23. Does it make the government more accountable to people?	No	5	2.4
	Yes	49	23.3
	More or Less	154	73.3
	Not Applicable	2	1
24. Does digitalisation improve website maintenance?	No	7	3.3
	Yes	178	84.8
	More or Less	19	9
	Prefer not to say	6	2.9
25. Does it increase website visitors?	No	18	8.6
	Yes	100	47.6
	Prefer not to say	92	43.8
26. Does the system make workers more efficient?	No	7	3.3
	Yes	170	81
	Prefer not to say	33	15.7
27. Is there government pressure to use the system?	No	114	54.3
	Yes	74	35.2
	Prefer not to say	22	10.5
28. Advantages of using the system	Efficiency, Convenience	139	66.2
	Other Benefits	48	22.9
	Prefer not to say	23	11

29. Disadvantages of the system	Not Secure, Technical Issues	42	20
	Lack of Technical Skills	25	11.9
	Other Disadvantages	35	16.7
	Prefer not to say	108	51.4
30. Suggestions to increase system use	Provide Training	43	20.5
	Provide Adequate Resources	66	31.4
	Other Suggestions	61	29
	Prefer not to say	40	19

(Source: Field work)

PART – II

This section includes a specific case study on ten (10) selected Government offices – DICT, Planning & Programme Implementation Department, Department of Information & Public Relations (DIPR), Agriculture Department, P&E Department, PHED, Food, Civil Supplies & Consumer Affairs Department (FCS & CA), Department of Personnel & Administrative Reforms (DP&AR), Urban Development & Poverty Alleviation Department (UD&PA) and Transport Department. The main focused on the follow – up study includes means of communication, uses of online initiatives and uses of computers in their daily work.

1. Public Health Engineering Department –

Means of Communication

Communication is held in blended mode i.e., used of paper and applications like email, whatsapp for communications within and across the Departments.

Uses of Computers in office work

Computers are mainly used for doing daily office works like – making draft, meeting minutes, e – file tracking, forwarding leave applications and used of notesheet.

Online Service Initiatives

The online services offered to the people includes – Mipui Aw, RTI and online water bill payment gateway.

Online payment of water bill is made available to all the district capital. Recent initiative is to enabled online transaction available to towns. Another ongoing project of the Department is to enable online application for water connections, groundwater extraction online (a project in which a person has to get water extraction permit beforehand even if the groundwater was within their purview).

2. Power & Electricity Department –

When it was first established in 1975, the Power and Electricity Department was initially supervised by the Superintending Engineer of the State Public Works Department. This continued until the department gained its independence in the early 1980s. Prior to the formation of a circle, the Assam State Electricity Board (ASEB) was in charge of managing all operations in Mizoram that were associated with the generation and distribution of electricity until March 1975. With the establishment of the Chief Engineer position in 1983, the Department was able to achieve its full-fledged directorate status without any further steps. When the Department Head position was established in 2008, the position of Engineer-in-Chief soon followed.

In its capacity as a unified utility, the Department is responsible for the production, transmission, distribution, and dispatch of electric power supplies throughout the entire state of Mizoram. Additionally, it is responsible for the promotion, development, and maintenance of the Power Distribution Network, which ensures that Mizoram experiences a reliable and sufficient supply of electricity throughout the entire state.

According to the Census completed in 2011, the average consumption of energy in the state is 219 kWh per person, and the Department of Energy currently provides services to approximately 200,000 customers across all categories. The total installed capacity of the state-owned generating system from Small Hydro Power (SHP) is 29.35 megawatts (MW), while the capacity of the thermal plant at Bairabi, which is maintained as a backup supply, is 22.92 megawatts (MW).

The Secretary (Power) is the administrative head of the Department, while the Engineer-in-Chief is the technical head and they are supported by four Chief Engineers. Chief Engineers are responsible for providing technical support. At the moment, there are a total of twenty divisions, fifty-one sub-divisions, and nine circles, which collectively include the Electrical Inspectorate and the ZEDA-Zoram Energy Development Agency.

i. Online Service Initiatives –

Revamped Distribution Sector Scheme (RDSS), Re – structured Accelerated Power Development and Reforms Programme (R – APDRP), PM – Surya Ghar: Muft Bijli Yojana and Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) are the ongoing initiatives that has been carried out by the Department.

Smart Meter is being prepared to be roll out by February, 2025. Online electricity bill payment is made applicable in 18 sub divisions (it includes 9 towns) out of 35 sub divisions.

ii. Means of Communication –

The P & E Department uses paper as an official mode of communication. In case of urgent matters situation, email and Whatsapp are also used simultaneously across and within the Department.

3. Transport Department –

Unlike in other states, where the transport sector is managed by road transport firms, the Transport Department in Mizoram is solely responsible for this matter. This is in contrast to other states. Before the year 1988, the whole of the transportation of both people and products was carried out solely by MST buses and trucks or under its supervision. However, as a result of the expansion and implementation of The Motor Vehicles Act, 1988, the scope of the system has been significantly reduced. The Motor Vehicle Wing of the state is also a component of the Transport Department, which is part of the Government of Mizoram. The Transportation Department is responsible for dealing with issues that are mostly associated with vehicle transportation. The Motor Vehicles Taxation Act and the Rules that were developed after it are both administered by the Department. In addition, the Department is responsible for controlling, supervising, and regulating the operations and procedures of the different entities that fall under its jurisdiction. State Transport Authority and Motor Vehicle Wing are the two organisations that fall under this category. Additionally, there is a Passenger Transport Service that is administered by the state, and its name is Mizoram State Transport. Not only does it have a big and vital role to play in the area of rationalisation, development, and improvement of the Road Transport System in Mizoram, but it is also a key revenue-generating department.

Online Service Initiatives –

i. In order to track the file movement within the Department, a software had been developed and is being used simultaneously with the Digital File Movement Tracking by the State Government. This file movement software has been developed in order to improve the delay in processing of the file across different officials.

ii. Several online services offered to the citizens are – online learner license application, registration renewal, payment of road tax, special permit applications for vehicle carrying passengers and goods, electronic Detailed Accident Report (eDAR) which are basically concerned with accident claims.

iii. The online services that have been used by the officials are –

- Integrated Road Accident Database (IRAD): It is being used by the Department in collaboration with the Police Department for enquiry purposes with regards to road accident. On the approval of Directorate of Transport Office (DTO), Motor Vehicle Inspector (MVI) can have inspections on such matters and the reports or statement has been send to the concerned authority.
- E – Challan application is another widely used application by the Department and the Traffic Department. The challan can be easily booked by the enforcement duty by entering the vehicle number and other necessary details.
- KAI Application – In order to ensure punctuality and regularity among the employees, this app has been used. It is found that this initiative has a positive impact on the employees as they are bound to reached on time and left only after the working hours. It was reported that employees sometimes faced issue with this app as it cannot record their attendance on time. An action has been put to solved the problem. This application has been used since 18th September, 2024 and they were the early users among various Departments.

  The Government has not only introduced the used of this system but it has also made official notification for penalty of the defaulters. An employee who had failed to reached on time three (3) times a week without reasonable excuses is supposed to be penalised with deduction of half day casual leave. The notice with regards to the penalty had been issued on 2nd November, 2024.
- Vehicle Location Tracking Device – This system has been initiated under Nirbhaya Project after Nirbhaya incident at Delhi in 2012. This

system has been enforced to be used in passenger carrying vehicles which are registered since 2019 but later on it has been enacted to be used by all. In order to track the location, emergency panic button has to be installed in every vehicle so that when unforeseen circumstances happened, it could easily be pressed and enabled the enforcement authority to easily identified the location.

iv. Uses of Computers –

Computers have been used for monitoring VAHAN and SARATHI software which are basically concerned by vehicle registration and driving license respectively. It has also been used for drafting notes, monitoring the attendance applications and various online services it has offered.

v. Upcoming online service initiatives –

- MST Online Booking is in progress at the moment and will be soon made available for the citizens to utilised it.
- Border Check Post Module is another initiatives for registering in online mode at the entry post. It will made available to the citizen once it gets approval from the Ministry.

vi. Means of Communication –

Within the Department, Whatsapp has been used as a means of communication. Across the Department, email and paper has been in used as a means for official communication. Not only across the Department, for dealing with the Ministry at the Central level, online services had been used.

4. Department of Personnel & Administrative Reforms (DP&AR) –

Online Services:

i. Digital File Tracking System:

It is a system in which the file movement can easily be tracked and this system has been used in all the Secretariat Departments and is planned to be rolled out in all the subordinate offices.

ii. E – Leave:

Leave Application Management System (LAMS) has been in used since 2022. Leave Applications and accounts are processed online through e – leave by all Group 'A' officers under Government of Mizoram.

iii. SPARTAN:

It is an online portal through which property returns and PAR has been done fully in online mode. This application has been developed in order to avoid delay and loss of records.

iv. Biometric Attendance:

In order to ensure efficiency among the workers, discipline and punctuality is maintained among the employees through Biometric Attendance. This system has been used in all the Secretariat Departments and for the rest of the subordinate offices, KAI app is being used. This system has been planned to be integrated with e – leave apps so that if the attendance is not recorded, the leave balance will automatically gets debited.

v. An initiative to implement an electronic office in the

secretariat is currently being processed, and funds, which have been allocated from the Central Government, have been allocated. The implementation of the pilot project on e-office is scheduled to take place by the middle of the year 2025. The first meeting of the Steering Committee took placed on December 4th, 2024. This committee was established in order to ensure the successful implementation of the electronic office. The initiatives have been taken in conjunction with the Department of Information and Communications Technology (DICT), the National Information Centre (NIC), and the Finance Department.

5. **Department of Information & Communication Technology** (DICT)

The Department of Industry, which was the Nodal Department up until October 2004, was the initial organisation that was responsible for the operation of the DICT. A Deputy Secretary was appointed to serve as a deputation. In addition, on November 8, 2004, a new position of PIO was established, and the Nodal Department was reorganised to become the Planning and Programme Implementation Department. This newly created position was taken on by the Deputy Secretary, who also served as the department's Public Information Officer and Deputy Secretary. On the 10th of July in 2008, a completely separate DICT was established. As a consequence of this, on November 20, 2012, the Principal Informatics Officer was promoted to the position of Chief Informatics Officer, thereby taking over full responsibility for the Department. To this day, the Department has been working hard to make Mizoram one of the states in the country with the highest level of information technology literacy, all the while providing citizen-focused services that are enabled by information and communication technology for the purpose of societal welfare and development.

The department has initiated several initiatives since its establishment to realise the objectives and vision articulated by the Government of Mizoram for fostering economic growth and sustainable development in the State via the implementation of ICT technologies. The Department of ICT was founded as an independent Directorate in October 2008 to formulate policy, plan, execute, and monitor Information and Communication Technologies and e-Governance initiatives. The Department envisions utilising Information and Communication Technology to provide accessible information and government services pertaining to the basic needs of individuals within their localities, minimising procedural formalities and thereby fostering economic development throughout their lives.

DICT operates in blended mode i.e., using Both papers and computers. Their purpose of using computer includes –

i. project implementation and monitoring,
ii. doing daily office works through MS Excel, MS Word, Powerpoint

iii. Drafting and making note sheet for official purposes

Online Service Initiatives –

The online services that have been utilised by the DICT includes –RTI, Online Property Returns, e – leave for all Group A officers, PAR and IFMIS. KAI Attendance have been implemented in 2024 in order to maintain a record of attendance of the workers. This system had been implemented so as to enforced efficiency and effectiveness among the employees. Besides these services, several online services have been provided by DICT to the citizens through MSeGS. The software that are commonly used for network monitoring includes – PHP, MySQL, UIX.

6. Planning & Programme Implementation Department –

Uses of Computer –

Project submission to Central Ministry, Email, writing concept note, making Quarterly Progress Report (QPR) through Excel Workbook, video conferencing, google meet, letter drafting and correspondence, email, monitoring Poorvottar Vikas Setu (A portal through which North Eastern Regions can monitor projects).

Online Service Initiatives –

Mizoram Planning (MPLAN) to be rolled out by 2025, SDG Dashboard – Performance tracker, Mizoram Startup Mission (MSUM) – for entrepreneurship and skill development. Among the online services to the employee includes – KAI App, File Movement – e File for tracking file movement within the Department, e – Leave for Group A Officials.

7. Urban Development & Poverty Alleviation Department –

In order to carry out a variety of Urban Development and Poverty Alleviation initiatives, including Urban Development Schemes, the Urban Development and Poverty Alleviation Authority (UD&PA) was established on August 24, 2006. This Department is responsible for overseeing the Municipalities of Mizoram that are

classified as Census Towns or Notified Towns. The Department of Urban Development and Poverty Alleviation is currently implementing various initiatives across the state's urban districts, including those pertaining to development and poverty alleviation, sanitation and waste management programs, as well as urban and regional planning.

Online Services Initiatives:

i. KAI App – It is an initiative of MSeGS for maintaining attendance of the employees.
ii. E – Leave: It has been implemented for leave application to all Group 'A' officers under the State Government.
iii. Pradhan Mantri Awas Yojana (PMAY), Deendayal Antyodaya – National Urban Livelihoods Mission (DAY – NULM), Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Swachh Bharat Mission 2.0 and RTI.
iv. Grievance Redressal Mechanisms – Mipui Aw, DAY – NULM.

Uses of Computers:

Monitoring various schemes and programmes – PMAY, DAY – NULM, AMRUT, Swachh Bharat Mission 2.0 and RTI.

8. Agriculture Department –

Following the acquisition of UT from the state of Assam in 1972, the Agriculture Department of Mizoram started operating as a full-fledged department shortly thereafter. Since that time, the department has been involved in the implementation of a number of CSS and State Borne Schemes. At the moment, there is a school of Agriculture Science located in Hnahthial, which offers a diploma program that lasts for two years. Additionally, there are eleven District Agriculture offices and twenty-six Block Agriculture offices that fall under the Department of Agriculture.

Agriculture Department, Government of Mizoram have been carrying out certain welfare programme for the citizen through Central Ministry initiatives. Seed licensing,

fertiliser licensing, water harvesting structure, pipes for irrigation channel, agriculture mechanisation tools – power tiller, tractor, transplanter has been carried out in offline mode, where applications has been obtained and submitted to the office physically. Among the online services that has been provided by the Department include PM – KISAN where financial support has been given to the farmers for ensuring that their productivity has increased.

In order to ensure efficiency and effectiveness among the users, the state Government started developing online services for the citizen i.e., Digital Infrastructure in Mizoram. Not only that Sustainable Food & Agriculture Service (SFAS) Portal has also been under processed for implementation in the near future.

The means of official communication within and across departments include – Paper and Mail. However, communication within the Department are also held through Whatsapp Group.

The uses of computers include doing daily office work through MS Word, Excel, e – tender procurement, monitoring the attendance of the employees.

9. Food Civil Supply & Consumer Affairs Department –

The Supply and Transport Department was founded on May 15, 1972, as per Government of India letter No. 7/15/72-CITS dated March 31, 1972. Mizoram was established as a Union Territory, separated from the State of Assam, on January 21, 1972. The Department was tasked with the fair distribution of vital commodities to the people and overseeing the inter and intra-State/UT movement of persons and products. Shortly after Mizoram attained full statehood on February 20, 1987, the Department of Supply and Transport was divided into the Civil Supplies Department and the Transport Department on June 4, 1987, as per Notification No.STE.63/78/95 dated June 4, 1987. Subsequently, the topic of food was assigned to the Civil Supplies Department and renamed as the Food & Civil Supplies Department. On November 17, 2004, it was rebranded as the “Food, Civil Supplies & Consumer Affairs Department” after the allocation of the Consumer Affairs topic to it.

The Food, Civil Supplies and Consumers Affairs Department is included in Schedule XII of the Mizoram Allocation of Business (AoB) Rules, 2019, as per GAD Notification No. A-46013/1/2017-GAD, dated June 19, 2019.

Online services:

The online services that have been provided by FCS & CA Department includes the following:

1. e-daakhil

It is a Government to Citizen (G2C) services which permits online filling of consumer disputes.The monitoring agencies for this portal are – Department of Consumer Affairs, Government of India & National Informatics Centre.

2. Ration Card Management System (RCMS)

It is a unified portal which is widely used across the country where in addition, deletion and management of ration card is processed using Aadhaar seeding. It has limited access i.e., one time Log In using OTP. The website is accessible by all concerned District Civil Supplies Officer.

3. Aadhar Enabled Public Distribution System (AePDS)

It is a Government to Public services and vice versa. It is a nation – wide website where all the information about NFSA related to the State is accessible without any restriction.

4. Public Financial Management System (PFMS)

It has a restricted access for facilitating payment and exchequer control. It is managed by Controller General of Accounts, Ministry of Finance, Government of India.

5. Right To Information (RTI) Portal

This portal is accessible to public. It is managed by Mizoram State e-Governance Society

6. Mipui Aw

It is Government to Citizen service and vice versa. It is a portal where citizens can lodge any matter related to service delivery by department. It is managed by Mizoram State e-Governance Society.

10. Department of Information & Public Relations (DIPR) –

I&PR is the nodal department of the Government of Mizoram. Its primary responsibility is to disseminate information to the general public about the different operations of the government via the media. Additionally, it is responsible for giving feedback to the government about significant issues that are represented in the media. Not only that, but it is also the official and authorised PR agency of the Government of Mizoram.

When it comes to the promotion of programs and policies that lead to a stronger and better understanding between the people and the government, the Department plays a crucial role in the process. Additionally, it serves as a conduit of communication between the government and the media, and it plays an important part in bringing welfare programs to the participants of the population.

In an effort to spread awareness about Mizoram, also known as "The Land of Peace and Progress," to the millions of people all over the globe, the Department is working to create an environment that is peaceful and ushers in a new age of development. As a result, the Department of Information and Public Relations is tasked with a wide range of responsibilities, including the creation of awareness among the general public about the country, the state, its history, diversity, heritage, customs, its progress in a variety of disciplines, and its issues. It not only encourages and inspires the general people to take part in the national effort for the integrated development of the state, but it also disseminates information about the government, including its operations, policies, and programs. In addition to this, it provides the government with feedback about its work. The whole of these activities comprised public relations work, which includes coordinating with numerous departments, the press, AIR, Doordarshan, and local cable TV providers, as well as conducting promotional campaigns across several media platforms.

It is the Director who is in charge of the Department, and he or she is aided by two Joint Directors, eight Deputy Directors, and seven IPROs. The Deputy Directors are in charge of the District Headquarters in Siaha and Serchhip, while the IPROs are in

charge of Lunglei, Lawngtlai, Champhai, Mamit, and Kolasib. Every single official in the Department is a member of the Mizoram Information Service (MIS) cadre. Regarding the aforementioned media operation, the Department is equipped with a Public Relations wing, a Photo wing, and technical wing.

Means of Communication:

The means of communication by the DIPR across the Departments and Districts is through email and papers. For any emergency purpose, email is often used and is followed by paper.

Online Services:

1. KAI App:

For maintaining attendance of the employees, this application have been used.

2. E – Leave:

For Group 'A' officers this application has been utilised and for the rest of the employees, paper work is still in used.

3. Press Release Archives:

This service has been offered in order to enable the citizen to access the press release anytime, anywhere.

4. Integrated Financial Management Information Systems (IFMIS):

It is a system through which Government officials financial system are keep on track.

5. Government e – Marketplace (GeM) Purchasing:

It is a portal through which Government offices procured goods and services.

6. Performance Appraisal Report (PAR):

It is a process through which the employees yearly performance has been reviewed in online mode.

3.3. SUGGESTIONS

On the basis of the results of the survey, the following are some recommendations that can be made to improve the efficiency of the Government offices through digitalisation of offices under Government of Mizoram:

1. Increase Training and Education

Comprehensive Training Programs: In order to guarantee that all employees possess the necessary skills to make effective use of the digitalised office management system, it is imperative that comprehensive training programs be developed and put into action. In order to maximise the impact of training, it should be tailored to different levels of proficiency and job roles.

Ongoing Support: As employees become more familiar with the system, it is important to provide ongoing support in the form of workshops, online resources, and helpdesks. This provides the opportunity to address any issues or questions that may arise.

2. Improve Infrastructure and Resources

Invest in the Upgrade of Facilities: In order to ensure that the digitalisation system operates without any hiccups, it is necessary to make investments in the upgrading of the technological infrastructure, which includes computers, software, and internet connectivity.

Allocation of Resources: Make certain that sufficient resources are allotted for the purpose of providing support and maintenance for the system. This includes allocating funds for the provision of technical support and upgraded systems.

.**3. Enhance Security Measures**

In order to address concerns regarding the security of the system, it is necessary to strengthen security protocols and implement robust security measures. Encryption, routine security audits, and training employees on the most effective policies and procedures for data protection are all included in this.

Addressing Technical Issues: It is important to identify and resolve any technical issues as soon as possible in order to reduce disruptions and increase confidence in the system's dependability.

4. Address Technical Skill Gaps

Skills Assessment: Carry out a skills assessment in order to determine where there are gaps in technical knowledge, and then provide training that is specifically designed to fill these gaps.

Programmes for Skill Development: Create programmes that will improve the technical skills of employees, with a particular emphasis on areas in which there are deficiencies.

5. Foster Awareness and Support

Campaigns to Raise Awareness: Commence awareness campaigns with the purpose of bringing attention to the advantages of the electronic payment system and the role it plays in enhancing both efficiency and transparency. Support can be garnered and resistance to change can be reduced with the help of this.

Showcase Success Stories: In order to motivate and encourage other departments, it is important to share success stories and positive outcomes from departments that have successfully implemented the system.

6. Facilitate Transition

Phased Implementation: Take into consideration a phased approach to the implementation of the system, beginning with departments that are better prepared or

were more willing to adopt it. The approach should be refined for use in other departments by utilising their experiences.

Hybrid Systems: To make the transition easier, it is recommended to maintain a hybrid system that includes both paper and electronic components during the initial stages of adoption. This will allow for a gradual transition.

7. Monitor and Evaluate

Regular Assessments: Carry out regular evaluations of the system's performance and the level of satisfaction experienced by users in order to identify areas that could be improved and to make any necessary adjustments.

Feedback Mechanism: Employees should be able to report problems and offer suggestions for improvement through a feedback mechanism that should be established. Make decisions about system enhancements based on this feedback in order to ensure it is accurate.

8. Enhance Government Support

Policy Development: When it comes to supporting the adoption and utilisation of the electronic payment system, it is important to develop clear policies and guidelines. The establishment of expectations and the provision of incentives for compliance are included in this.

Leadership Engagement: nvolve the heads of departments and other government leaders in the process of advocating for the system and addressing any challenges that may arise during the implementation process.

9. Address Perceived Disadvantages

Secure System Design: Make efforts to address concerns regarding the security of the system and the reliability of the technology. Consult with professionals in the field of cybersecurity to guarantee that the system satisfies stringent security requirements.

Technical Support: In order to minimise downtime and quickly resolve any issues that may arise, provide dependable technical support.

10. Encourage Participation

Incentivize Adoption: Take into consideration the possibility of offering incentives to departments and individuals who successfully implement the electronic payment system and display active engagement with it. In order to encourage widespread adoption, efforts should be recognised and rewarded.

The implementation of these suggestions has the potential to assist in addressing the challenges that are currently being faced and to improve the overall effectiveness of the electronic payment system. This will ultimately result in improved operational efficiency, increased transparency, and increased satisfaction among employees and stakeholders overall.

CHAPTER IV

USES OF E – PAYMENT SYSTEM IN AIZAWL

The previous chapter consisted of a study on the digitalisation of offices in Aizawl. It had highlighted how far the Government had started using the computers along with internet facilities i.e., digitalisation in their offices in order to improve the services within the department and delivery of services to other stakeholders. The level of readiness among the Government and the employees in order to fully utilised the system in their day – to – day functioning had also been evaluated. So, it was a study on the interaction among various Government entities and within their respective Department itself. Now, this chapter will highlight how the facilities that has been provided by the Government had been utilised by the target group i.e., the people through a study on the uses of e – payment for water and electricity bills.

The adoption of electronic payment systems in Mizoram's Public Health Engineering Department and Power & Electricity Department has transformed the way citizens interact with essential services by making transactions faster, more convenient, and transparent. This chapter evaluates the implementation of these electronic payment systems, focusing on their usage, public awareness, and the overall impact on bill payment processes for electricity and water services. It explores both the advantages and challenges of using electronic payment methods, as well as the system's potential for growth and improvement in the future.

The aspects of the evaluation include the level of public familiarity with the e-payment systems, the reliability and efficiency of these platforms, and the challenges users face in transitioning from traditional methods of payment. The chapter also examines how these systems have contributed to improving service delivery and user satisfaction, as well as the preferred payment methods and applications used by the public.

4.1. Data Collection Instrument

Data was gathered using a structured questionnaire divided into five sections to evaluate different aspects of the e-payment system:

Section 1: Demographic Information

This section collected information such as age, gender, education level, occupation, and location of residence.

Section 2: Awareness and Usage of E-Payment System

Questions in this section focused on respondents' knowledge about the e-payment system, duration of awareness, frequency of usage, and methods employed for making payments.

Section 3: Perceptions of Reliability and Trust

This section explored the reliability and security of the electronic payment system from the respondents' perspective, including any initial trust issues and challenges faced.

Section 4: Preferences and Efficiency

This section identified respondents' preferred methods of payment, their views on whether the e-payment system should replace traditional payment methods, and the efficiency of the current system.

Section 5: General Opinions and Recommendations

The final section collected general opinions on the system’s effectiveness, future potential, and recommendations for improvements.

4.1.2. Data Analysis

Descriptive statistics, including frequency and percentage, were taken to summarise the responses and the patterns of citizens utilisation of government services through e – payment.

4.1.3. Ethical Considerations

Participants provided informed consent before taking part in the survey. The privacy and confidentiality of respondents were strictly maintained throughout the research

process, with all data being anonymized. The information collected was used solely for research purposes and was not shared with any third parties.

4.2. Results of Data Analysis

The results of the data analysis are structured accordingly as:

4.2.1. Demographic Characteristics of the Samples

4.2.2. Awareness and Usage of E-Payment System

4.2.3. Perceptions of Reliability and Trust

4.2.4. Preferences and Efficiency of E-Payment System

4.2.5. General Opinions and Recommendations

4.2.1. Demographic Characteristics of the Samples (Table 4.2.1)

Table 4.2.1 presents the demographic characteristics of the 550 respondents. In terms of gender, 65.4% of the respondents were female (n = 359), while 34.6% were male (n = 190), and 0.2% (n = 1) did not provide a response. Regarding age distribution, 21.7% of participants (n = 119) were aged between 15 and 25 years, 34.6% (n = 190) were between 26 and 35 years, 30.6% (n = 168) fell in the 36 to 50 age range, and 13.1% (n = 72) were aged between 51 and 62 years.

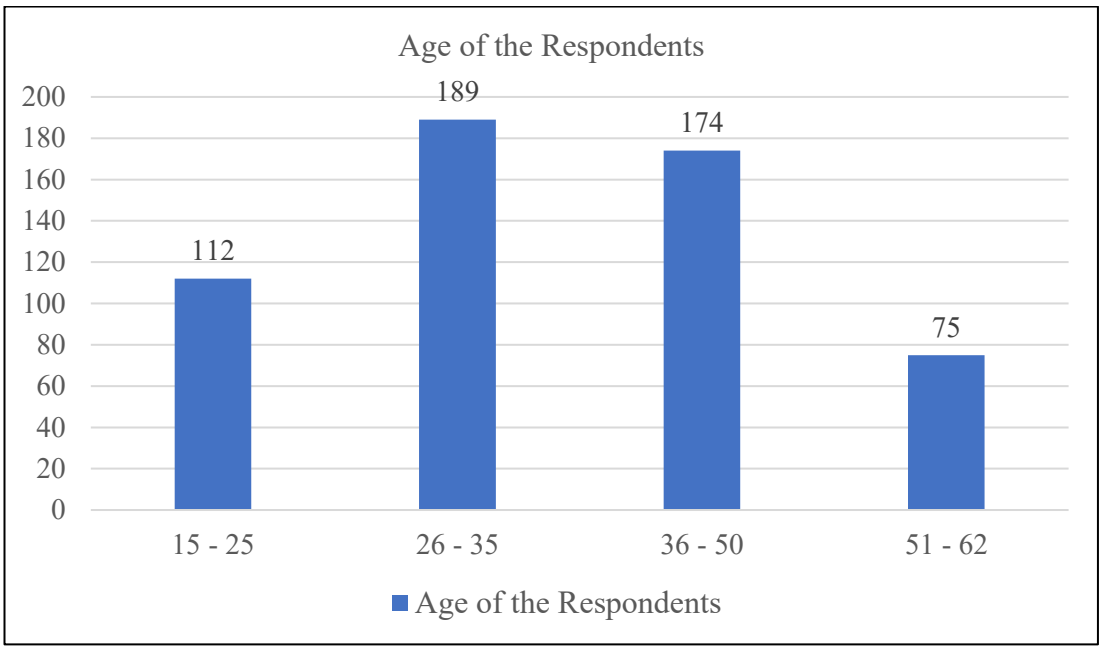


Figure 3: Chart representing the age of the respondents

Occupationally, the majority of respondents (40.8%, n = 224) were engaged in private business, while 30.1% (n = 165) were unemployed. Government servants made up 14.8% of the sample (n = 81), followed by professional workers at 10.2% (n = 56), and students comprised 4.4% (n = 24).

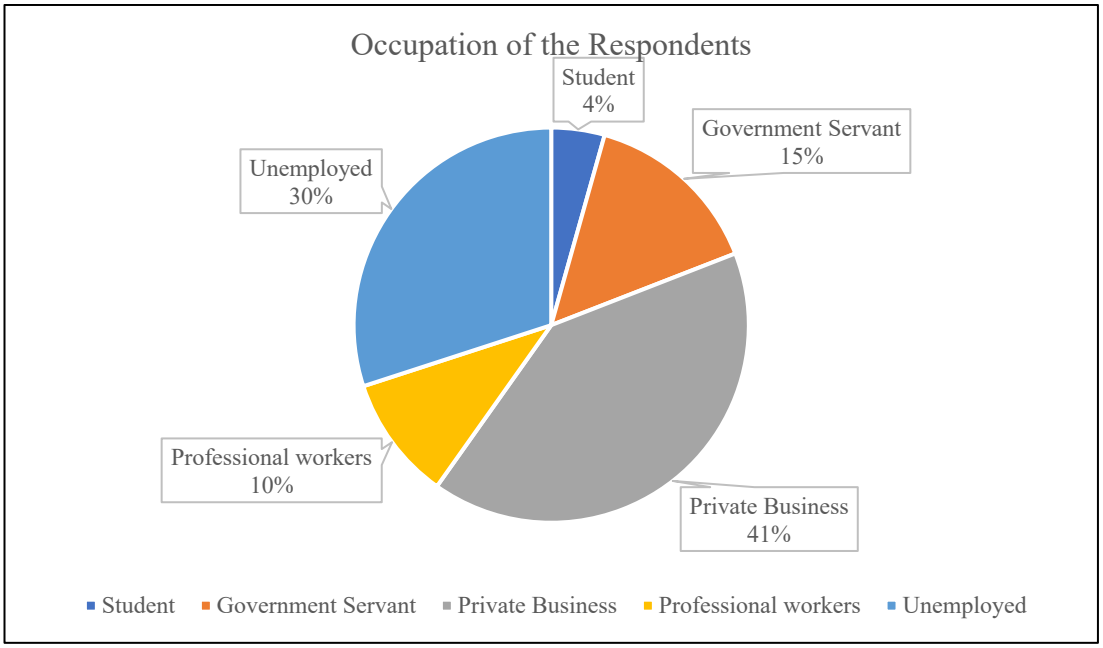


Figure 4: Pie Chart showing the occupation of the respondents

In terms of educational qualifications, 27.3% of the respondents (n = 150) had an education level of HSLC and below, 23.7% (n = 130) had completed HSSLC, 36.4% (n = 200) held a bachelor's degree, and 12.8% (n = 70) had attained a master's degree or higher.

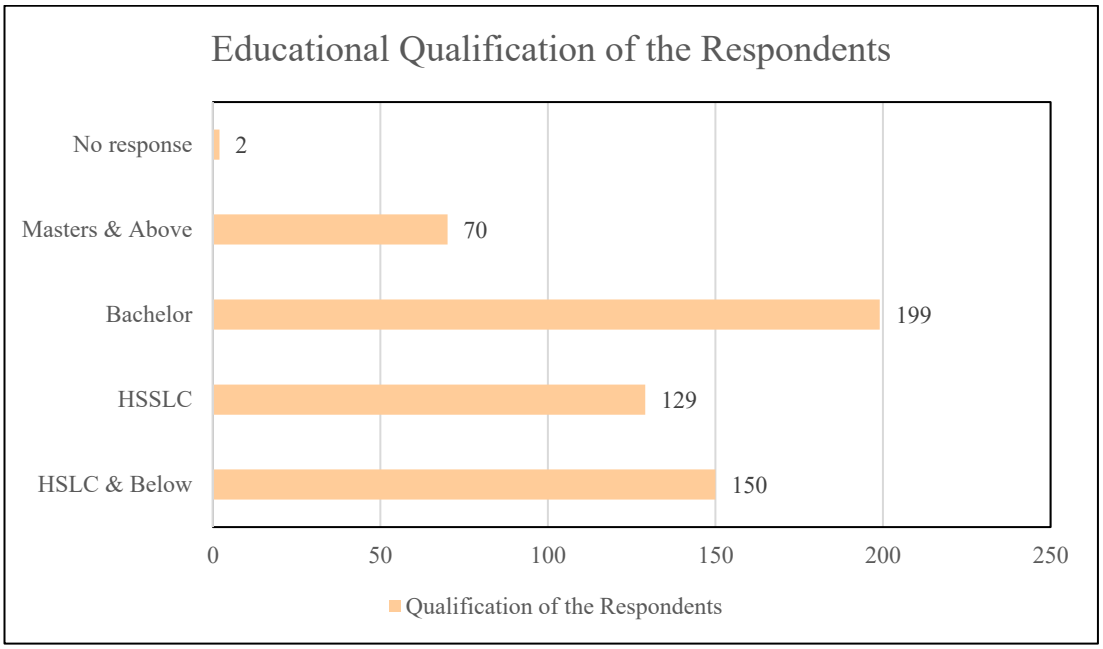


Figure 5: Bar Chart representing the qualification of the respondents

Table 4.2.1: Demographic Characteristics of the Samples

Demographic Variable	Category	N	%
Gender	Female	359	65.4
	Male	190	34.6
	No Response	1	0.2
Age	15 - 25	119	21.7
	26 - 35	190	34.6
	36 - 50	168	30.6
	51 -62	72	13.1
Occupation	Private Business	224	40.8
	Unemployed	165	30.1
	Government Servant	81	14.8
	Professional worker	56	10.2
	Student	24	4.4
Qualification	HSLC & Below	150	27.3
	HSSLC	130	23.7
	Bachelor	200	36.4
	Master & Above	70	12.8

(Source: Fieldwork)

4.2.2. Awareness and Usage of E-Payment System

Table 4.2.2 provides the respondents' awareness and use of the electronic payment system. A majority (94.55%) of respondents are aware of the e-payment system, with only 5.09% indicating they are unaware. The concept of e-payment was most commonly encountered through other sources (47.64%) or from friends (38%), while smaller percentages learned about it from television (5.64%) or social media (2%). Notably, 2.18% of respondents reported that they had not heard about it at all due to the fact that some of them belonged to minor age group while some of them were belonging to the old age group who does not have household responsibilities.

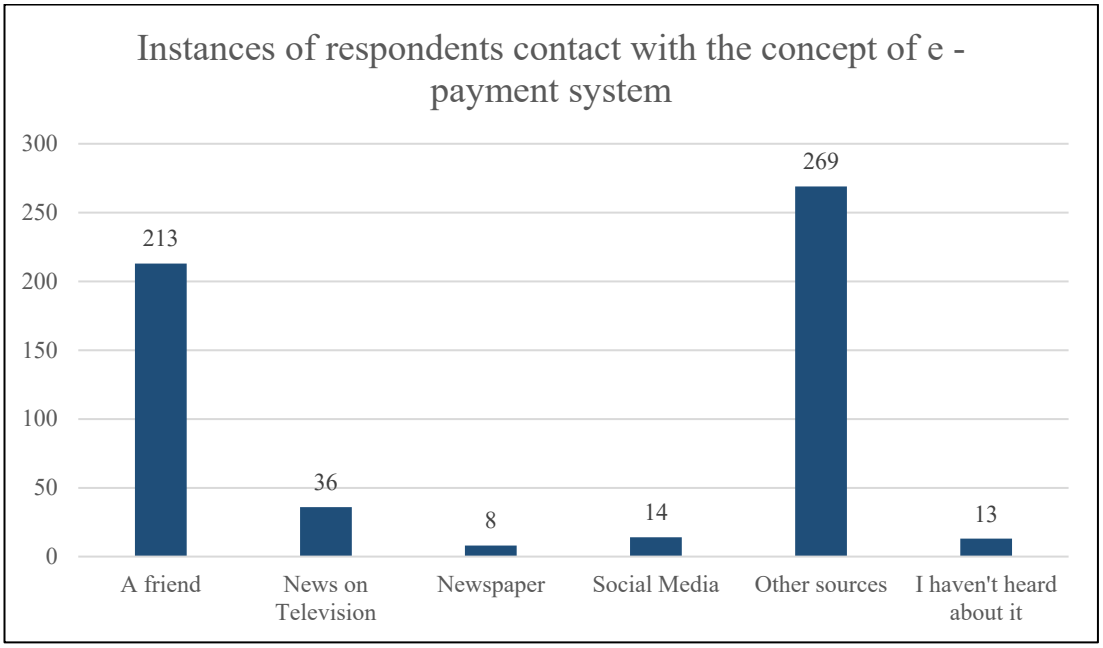


Figure 6: Column Chart showing the instances of the respondents contact with e – governance concept

Regarding awareness of the Mizoram State e-Governance Society (MSeGS), 73.45% had not heard of it, while 26% were familiar with it. Also, 80.55% of respondents were aware of the authority responsible for managing online payments for electricity and water bills.

As for the duration of awareness, 45.09% had become aware of the e-payment system between 2022 and 2023 because after the COVID – 19 Pandemic, people get used to the system of using the online transactions for making payment. The other 25.64% becoming aware between 2020 and 2021. A small percentage of respondents (5.09%) had never used the system, and 0.91% were unaware of its existence.

In terms of actual usage, 68.18% of respondents utilized the e-payment system for electricity bills, while 65.82% used it for water bills. A significant 91.45% were aware that the government has its own website for paying utility bills.

The most commonly used payment method was Google Pay (51.27%), followed by cash (22.73%). Other respondents used a combination of methods, such as cash and Google Pay (13.27%) or Google Pay and Paytm (2.18%). A minority used alternatives like PhonePe or Net Banking.

When asked if they knew how to make online payments independently, 88.18% responded affirmatively, while 10.91% did not. Among those who knew, 65.27% reported learning through self-study, while 22.91% learned with the help of others.

Table 4.2.2: Awareness and Use of Online Payment or E-Payment System

Sl.No	Question	Category	N	%
1	Are you aware of the electronic mode of payment system?	Yes	520	94.55
		No	28	5.09
		No Response	2	0.36
2	At what instance do you come in contact with this concept? [Instances]	A friend	213	38.73
		News on Television	36	6.55
		Newspaper	8	1.45
		Social Media	14	2.55
		Other sources	269	48.91
		I haven't heard about it	13	2.36
3	Have you heard of Mizoram State e-Governance Society (MSeGS)?	No	404	73.45
		Yes	143	26.00
		No Response	3	0.55
4	Are you aware of the authority responsible for carrying out the online mode of electricity and water bill payment?	Yes	443	80.55
		No	103	18.73
		No Response	4	0.73
5	How long have you been aware of this online (e-payment) system? (Roughly)	Have not used	28	5.09
		I am not aware	5	0.91
		Not sure	1	0.18
		Since its inception	22	4.00
		2014	1	0.18

		2016-2017	5	0.91
		2018-2019	58	10.55
		2020-2021	141	25.64
		2022-2023	248	45.09
		2024	21	3.82
		No Response	20	3.64
6	Do you utilise the e-payment system in paying the electric bills?	Yes	375	68.18
		No	174	31.64
		No Response	1	0.18
7	Do you utilise the e-payment system in paying water bills?	Yes	362	65.82
		No	187	34.00
		No Response	1	0.18
8	Do you know that the Government has a website on its own to pay electricity and water bills?	Yes	503	91.45
		No	43	7.82
		No Response	4	0.73
				0.00
9	Which method do you mostly use for making payments? [Payment method]	Cash	204	37.1
		Net Banking	9	1.64
		Google Pay	383	69.64
		Phonepe	12	2.18
		Paytm	28	5.09
		Others	23	4.18
10	Do you know how to make online payment on your own?	Yes	485	88.18
		No	60	10.91
		No response	5	0.91
11	If you do know how to make online payment, how do	Self - study	359	65.27
		Through the help of others	126	22.91
		Tutorial video	12	2.18

	you get to learn the use of this system?	No response	53	9.64

(Source: Fieldwork)

4.2.3. Perceptions of Reliability and Trust

A breakdown of the respondents' opinions regarding the dependability and trustworthiness of the electronic payment system is presented in Table 4.2.3. The majority (92.55%) considered the system reliable as they hardly faced any issue while making online transactions, only 6.91% expressed doubts, and 0.55% providing no response.

When asked if they trusted the system from the initial days of use, 81.45% responded affirmatively, while 16.18% did not, and 2.36% gave no response.

Regarding issues encountered while using the e-payment system, 76.36% reported facing no issues. However, 8.91% cited server or technical problems, and 8.36% mentioned other issues. Smaller percentages reported internet connectivity problems (2.55%) or a combination of server and connectivity issues (1.27%).

A large majority (90.73%) observed improvements in the system's functioning over the years, with 7.45% unaware of such changes and 1.09% reporting no improvement.

In terms of who benefits from the e-payment system, 66.36% believed that users or the public are the primary beneficiaries, while 26.18% thought both the government and users benefit. Only 7.27% felt the government benefits most, with 0.18% providing no response.

Table 4.2.3: Perceptions of Reliability and Trust About E-Payment System

Sl. No		Category	N	%
12	Do you consider that it is reliable enough to use the electronic mode of payment?	Yes	509	92.55
		No	38	6.91
		No Response	3	0.55
13	. Do you trust the system in the initial day of your usage?	Yes	448	81.45
		No	89	16.18
		No Response	13	2.36
14	What are the issues that you are likely to encounter while using the e-payment system? [Issues]	Internet connectivity problem	21	3.82
		Server/Technical problem	57	10.36
		Others	48	8.73
		I do not have an issue	421	76.55

15	Do you find any improvement in the functioning and its usage over the years?	Yes	499	90.73
		I am not aware	41	7.45
		No	6	1.09
		No Response	4	0.73
16	Whom do you think are beneficial in using the system?	Users/People	365	66.36
		Both	144	26.18
		Government	40	7.27
		No Response	1	0.18

(Source: Fieldwork)

4.2.4. Preferences and Efficiency of E-Payment System

Table 4.2.4 shows the respondents' preferences and perceptions of the efficiency of the e-payment system. The majority (96.55%) believe the utility of this service is likely to increase in the future, while 2.73% are uncertain, and only 0.18% disagree, with 0.55% not responding.

Regarding the most reliable application for bill payments, 73.45% prefer Gpay, followed by 9.82% who prefer to pay in cash. Other applications like SBI Yono (4.00%) and PhonePe (1.09%) also feature, but in smaller proportions. Some respondents (5.45%) use other unspecified methods.

When asked if the e-payment system should replace traditional payment methods, 63.64% favored continuing with e-payments exclusively because it is convenient and less time – consuming. However, 19.09% preferred using both systems, while 10.36% rejected the idea of exclusive e-payment usage because although it seems to be very

convenient, there are times error could occurred due to connectivity issue. A smaller percentage (6.18%) were unsure.

Regarding the purposes for which respondents use e-payments beyond paying utility bills, 24.91% reported using it for shopping, while 19.27% used it for business transactions (which includes fee payment, online shopping payment, etc). A notable percentage (15.27%) indicated limited use of e-payments, and 9.45% used it for both shopping and business. Other purposes, such as fee payments, house rent, and mobile recharges, were mentioned by 7.82% of respondents, while 6.91% used e-payments for any required purpose. A minority used e-payments for combinations of shopping, business, and other transactions.

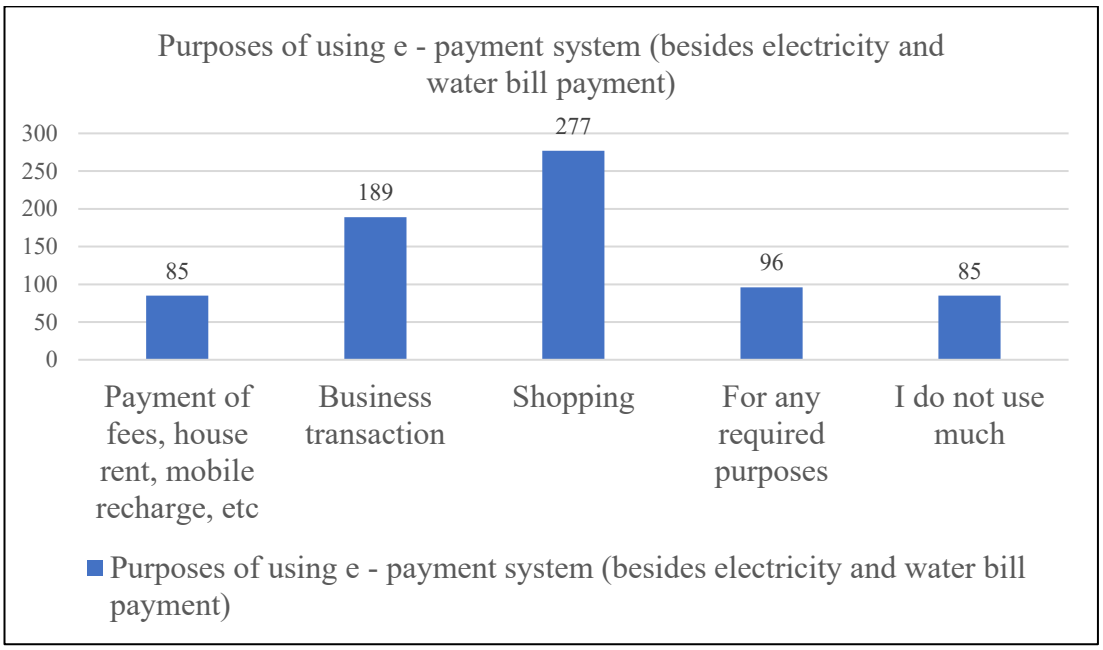


Figure 7: Column chart showing the purposes of using e – payment system

The following table 4.2.4 shows the preferences of the respondents and the efficiency of e – payment system

Table 4.2.4: Preferences and Efficiency of E-Payment System

Sl.No		Category	N	%
17	Do you think that the utility of this service is likely to increase in the future?	Yes	531	96.55
		I have no idea	15	2.73
		No	1	0.18
		No Response	3	0.55
18	Which application is most reliable to you in payment of bills? [Preferred Application]	Gpay	423	76.91
		BHIM SBI Pay	5	0.91
		SBI Yono	33	6.00
		PhonePe	11	2.00
		Internet Banking	11	2.00
		Prefer to pay in cash	55	10.00
		Others	35	6.36
19	Do you think it is more efficient to continue the usage of e-payment	Yes	350	63.64
		It is better if we use both	105	19.09
		No	57	10.36

	system and abort the traditional mode of payment?	I have no idea	34	6.18
		No Response	4	0.73
20	For what other purposes do you use the electronic mode of payment besides paying water and electricity bills? [Purposes]	Payment of fees, house rent, mobile recharge etc	85	15.45
		Shopping	277	50.36
		Business transaction	189	15.27
		For any required purposes	96	17.45
		I do not use much	85	15.45

(Source: Fieldwork)

4.2.5. General Opinions and Recommendations

Table 4.2.5 reveals the respondents' general opinions and recommendations regarding the e-payment system. A large majority (95.82%) view the system as helpful and convenient for users. However, 0.73% expressed concerns about trusting the system fully due to potential technical and connectivity issues. A small percentage (0.73%) highlighted the reduction in cash-related losses, while 2.36% had no clear opinion, and 0.36% provided other views.

When asked about reasons for using the online payment system, 89.82% cited ease and convenience as the primary motivators. A few respondents (1.45%) indicated that

the widespread usage of the system influenced their decision, and 0.55% appreciated the transparency of transactions. A minority (7.09%) did not provide a response.

For those who rarely use the online payment system, 8.18% attributed it to fees collected by NGOs. Some respondents (4.18%) preferred using cash, while 0.73% relied on others for payments. Others (4.91%) gave various reasons, and 78.00% provided no response.

When asked if the e-payment system should be expanded to all types of payments, 59.64% opposed the idea, 36.00% supported it, while 4.18% were unsure. A single respondent (0.18%) did not provide an answer.

Table 4.2.5: General Opinions and Recommendations Concerning E-Payment

Sl.No		Category	N	%
21	What is your view on the electronic payment system? [Views]	Helpful and convenient for users	527	95.82
		Unable to have 100% trust due to probable technical and connectivity issues	4	0.73
		I have no idea	13	2.36
		Reducing money lost as transaction could be done without cash	4	0.73
		Others	2	0.36
22	What is your reason for using the online mode of payment system? [Reasons for using online]	Easy and convenient	494	89.82
		Transactions can be seen easily	3	0.55
		Wide and popular usage by majority	8	1.45
		Others	6	1.09
		No Response	39	7.09
23	What is your reason for not	Fees are collected for earning by NGO's	45	8.18

	using the online mode of payment? (In case if you hardly use the e-payment system) [Reasons for not using online payment method]	Being okay with using cash	23	4.18
		Dependency on others for doing payments (Family members and friends)	4	0.73
		Others	27	4.91
		I do not have any specific reasons	8	1.45
		No Response	429	78.00
24	Do you think that this system should be introduced for all sorts of payment systems? [Opinion]	No	328	59.64
		Yes	198	36.00
		Unsure	23	4.18
		No Response	1	0.18

(Source: Fieldwork)

4.3. Discussion

The findings of the study indicate that the Public Health Engineering Department and the Power & Electricity Department of Mizoram appear to be successfully implementing the use of e-payment systems. This is due to the fact that a sizeable portion of the population is already utilising these digital platforms for the purpose of making payments on their bills. The adoption rates show promising trends, with 68.18% of respondents using e-payments for electricity bills and 65.82% using it for

water bills. This high level of usage shows that the government's efforts to implement electronic payment systems for these essential services are bearing fruit.

The awareness on government e-payment systems is also high—91.45% of respondents are aware that the government has a website dedicated to paying utility bills. This shows that while people are not always familiar with specific initiatives like the MSeGS, they do recognize and are using the online infrastructure set up for their utility payments.

Google Pay (Gpay) has emerged as the most popular application for these transactions in the study, with 51.27% of respondents choosing it as their preferred method for making payments. This could indicate that while the government has its own systems in place, third-party payment platforms are more trusted or simply more user-friendly, possibly due to their widespread use across various sectors. However, cash still accounts for 22.73% of payments, and some respondents prefer a hybrid approach, using both cash and e-payments (13.27%), showing that traditional methods still have a place alongside digital systems. The following bar graph represents the usage of different applications for making online transactions.

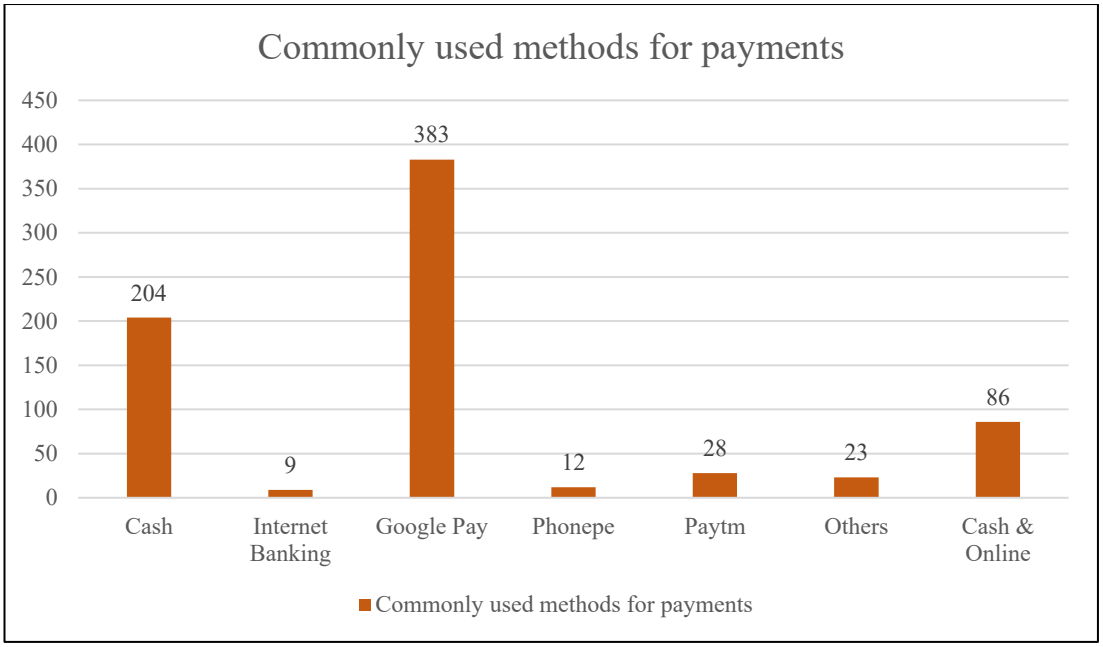


Figure 8: Bar graph representing the methods used for making payments

When it comes to reliability, a majority of respondents (92.55%) consider the e-payment system reliable for these payments, indicating confidence in the system's ability to handle utility transactions without major issues. However, some concerns linger—around 6.91% of respondents expressed doubts about the system's reliability, often citing issues like technical glitches or internet connectivity problems. The following chart shows the opinion of the respondents with regards to their opinion on reliability of online mode of payment.

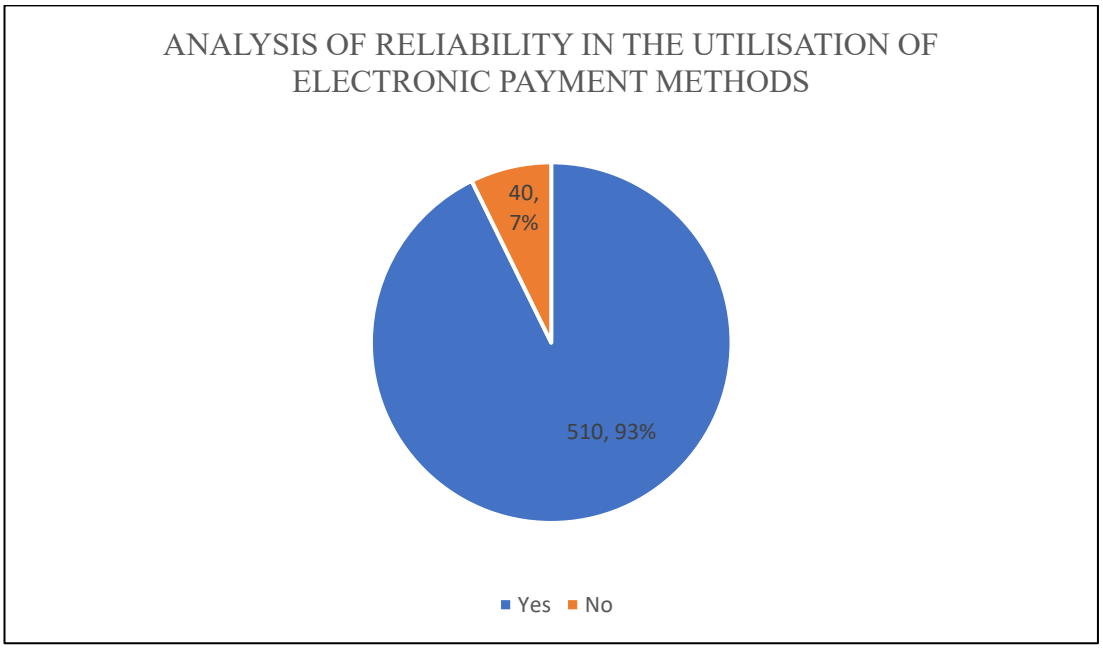


Figure 9: Analysis of reliability in the utilisation of electronic payment methods

The government's infrastructure has also been improving over the years, according to 90.73% of the respondents who observed a positive change in the functioning of the e-payment system. This suggests that the departments managing these systems have been making continuous efforts to enhance the user experience, address technical issues, and streamline the payment processes.

However, there are still some challenges. A small number of users experience technical problems or connectivity issues, with 8.91% citing server-related issues. While this is a relatively small percentage, it highlights an area where the departments can improve by focusing on the system's robustness and ensuring uninterrupted service.

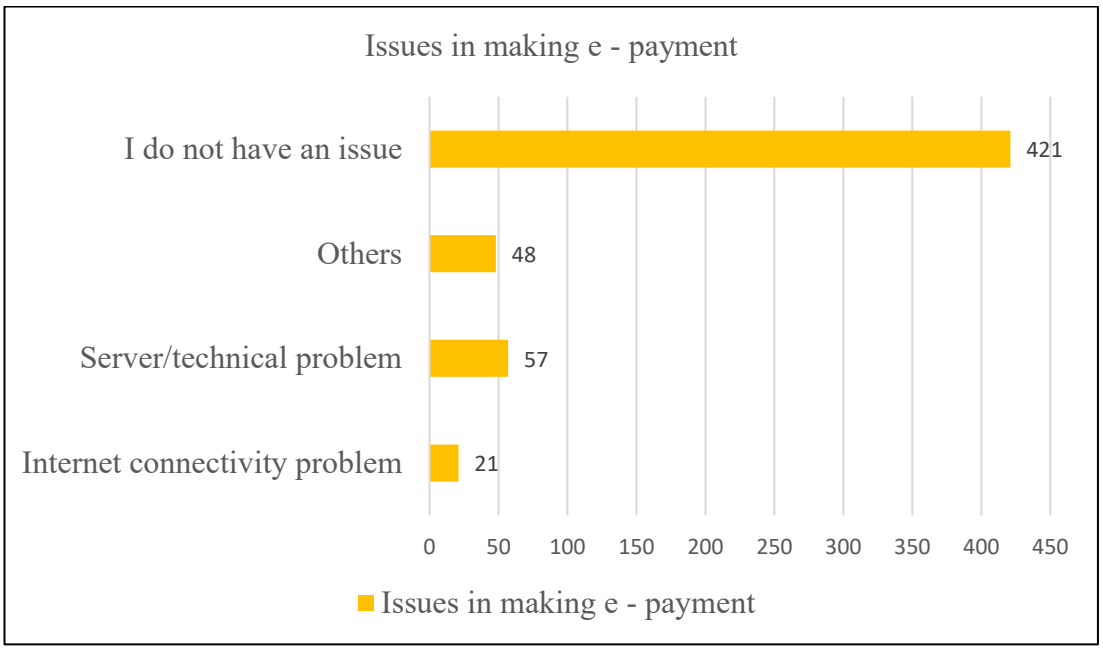


Figure 10: Bar Chart showing the issues encountered in making e – payment

Also, while the public is largely satisfied with the e-payment system for utility bills, there's still a preference among some to retain both digital and traditional payment methods. Only 63.64% of respondents fully support switching to e-payments exclusively, while 19.09% believe that a combination of digital and traditional methods is more efficient. This indicates that while the shift towards digital payments is strong, there's still some hesitation, particularly among those who may not feel comfortable relying entirely on digital methods due to the occasional issues or personal preferences.

Overall, the Public Health Engineering and Power & Electricity Departments of Mizoram seem to have made significant strides in implementing and promoting e-payment systems, with a large percentage of the population using them for essential services. However, continued efforts to improve reliability is recommended, and it is also necessary to address technical issues, while also offering support for those who prefer hybrid payment systems.

4.4. Issues and Challenges

The findings of the study indicate that the utilisation of electronic payment systems is, on the whole, a positive picture; however, there are some areas that could be improved upon. 94.3% of people have stated that they are aware of electronic payment systems, indicating that the majority of people are quite familiar with them. It is clear from the high level of awareness that digital payments have become an essential component of many people's day-to-day lives since they were first introduced. When it comes to the manner in which they became familiar with these systems, the role that community groups and friends play is significant. Approximately 52.8% of respondents obtained their information from sources within the community, while 37.3% obtained it from their circles of friends. Traditional forms of media, such as television, social media, and newspapers, have had less of an impact in recent years due to the fact that people in today's society are increasingly dependent on modern technology and electronic devices. There are only a few percentages of people who cite these as their sources of information.

There is a relatively low level of familiarity with the MSeGS, despite the fact that many people are aware of electronic payment systems. Among those who participated in the survey, only 21.2% are familiar with MSeGS, whereas 82.4% are aware of the authority behind online bill payments. Taking this into consideration, it appears that individuals who make use of digital payment systems may not be completely knowledgeable about the specific governance bodies that are responsible for creating these services.

A significant number of respondents make use of electronic payment systems in order to settle their utility bills, as the study demonstrates. Approximately 68.9% of people use them to pay their electricity bills, and 67.4% of people use them to pay their water bills. The majority of respondents have faith in these systems, with 97.4% indicating that they have confidence in their dependability from the beginning. A high level of competence is reflected in the fact that 97.4% of individuals are capable of making payments online on their own, representing their technical skills.

When it comes to learning how to use these systems, the majority of people learnt it on their own; 75.1% of people learnt through self-teaching or independent study. Tutorials or advice from friends and family were only relied on by a small percentage of the population. In light of this, it appears that even though a large number of individuals are proficient in the use of these systems, there may be a requirement for more structured educational resources to assist those individuals who are less confident.

Some respondents did, in fact, encounter problems, despite the fact that the feedback was generally positive. In the vicinity of 8.3%, problems with internet connectivity were reported, and 5.7% of respondents experienced server or technical issues. 80.8% of respondents, on the other hand, reported that they had no problems at all. The vast majority of people are of the opinion that the functionality of electronic payment systems has significantly improved over the course of time, with 99% of people acknowledging this progress.

For those who haven't adopted online payment systems, the reasons vary. Some are deterred by fees associated with these systems, which 38.13% of respondents mentioned. Others prefer using cash (33.81%) or have other reasons for sticking to traditional methods. A small group is dependent on others for making payments, and a few do not have specific reasons for avoiding online payments.

4.5. Suggestions

To improve the electronic payment systems used by the Public Health Engineering Department and the Power & Electricity Department in Mizoram, several important areas still need to be addressed to improve both efficiency and user satisfaction. While the current systems show promise, there are clear opportunities for growth and improvement.

First, the technical infrastructure of the e-payment platforms must be strengthened. Many users have expressed concerns about server downtime, slow transaction processing, and technical glitches. These issues may result in lack of or low confidence in the system. A stable platform is necessary to ensure that users are not deterred by technical issues. Investing in better technology, ensuring redundancy in servers, and

improving backend systems will surely help reduce these disruptions and provide a smoother user experience.

Also, while the system works well for many, users in remote areas, or those with limited internet access, are likely to struggle with adopting e-payment systems. Partnerships between the government and internet service providers could be beneficial in expanding reliable internet coverage, especially in rural parts of Mizoram. Offering offline options such as USSD codes or SMS-based payments may also ensure that even users with limited internet can engage with the system.

Training and user education also emerge as necessary aspects for enhancing system usage. While a significant portion of the population has independently learned how to use e-payment systems, a notable minority relies on others for help. Targeted digital literacy campaigns or hands-on workshops could help more users become independent and comfortable with the system. This could particularly benefit older users and those unfamiliar with digital platforms. Providing easily accessible tutorials, helplines, or on-the-ground assistance could increase the system's adoption and ease.

Moreover, to address concerns about security and trust in the early stages of usage, regular feedback mechanisms and transparent communication from the responsible departments would help. Users need to be reassured that their payments are secure and their data protected. This is especially important for first-time users or those who are hesitant to adopt e-payment methods due to fear of fraud or loss of funds. Proactive communication about system updates, data security measures, and how to resolve issues can help build trust.

Finally, expanding the types of payments that can be made via the e-payment system could increase encourage more citizens to adopt it. While the system is currently used primarily for electricity and water bill payments, there is potential to expand its reach to other sectors such as municipal taxes, fines, or even private transactions. This would further integrate e-payments into the daily lives of residents, making it an indispensable tool for managing finances.

In conclusion, while Mizoram's e-payment systems have shown considerable progress according to the study, addressing issues related to reliability, internet accessibility,

user education, and trust will be important in driving widespread adoption and satisfaction. The government can take steps to ensure that these systems are not only efficient but also user-friendly and inclusive, benefiting the whole population.

CHAPTER V

CITIZENS AWARENESS IN ELECTRONIC GOVERNANCE

The previous Chapter i.e., Chapter IV had shown a study on the utilisation of e – payment for electricity and water bills. The benefits and challenges of using the system had also been highlighted. The present Chapter provides an in – depth study into e – governance by evaluating the citizens participation in the electronic governance process. The study seeks to identify gaps in awareness, usage, and trust in such so as to enhance the effectiveness of e-governance initiatives for improved service delivery and citizen satisfaction.

5.1.Study Design

A quantitative research design was adopted to evaluate citizens' awareness in the e-governance process on key areas such as the level of engagement, interaction, and overall experience of citizens with electronic governance services.

5.1.1. Sampling

Respondents were selected using a convenience sampling method, which included a diverse group of 550 respondents aged 18 and above from Aizawl district. All participants were engaged with or had experience using electronic governance services to reflect the demographics of the population and their interactions with e-governance initiatives.

5.1.2. Data Collection Instrument

A structured questionnaire was used as an instrument for collecting data. The questionnaire was designed to collect comprehensive information about the demographics of respondents as well as their level of engagement with e-governance activities. The questionnaire was divided into two main sections:

1. **Respondent Profile**: This section collected demographic information, including age, gender, educational background, and occupation.
2. **Questionnaire**: This section included several subsections focusing on key aspects of e-governance:

- **Awareness and Knowledge of E-Governance**: This part included questions to assess the respondents' level of awareness and understanding of e-governance initiatives.
- **Interaction with E-Governance Projects and Government:** This subsection focused on gauging the respondents' awareness of specific e-governance projects and their direct interactions with such platforms.
- **Opinion on E-Governance and Online Interactions:** Questions in this section explored respondents' perspectives on the efficiency and effectiveness of e-governance services, as well as their satisfaction with online interactions facilitated by the government.

5.1.3. Data Analysis

The analysis of the collected data involved the use of descriptive statistics, including frequency and percentage calculations using MS Excel 2019.

5.1.4. Ethical Considerations

During the course of the research process, ethical considerations were an essential component. In order to ensure that all participants were fully aware of the objectives of the study as well as their rights, informed consent was obtained from each and every participant before they actively participated. At every stage of the research project, confidentiality and anonymity were strictly upheld, and every piece of information gathered was utilised solely for the purpose of conducting research and was not disclosed to any outside parties.

5.2. Results of the Data Analysis

5.2.1. Demographic Information of the Respondents:

Table 5.2.1 reveals that out of the total respondents, 341 (62.01%) identified as female, 209 (37.82%) as male.

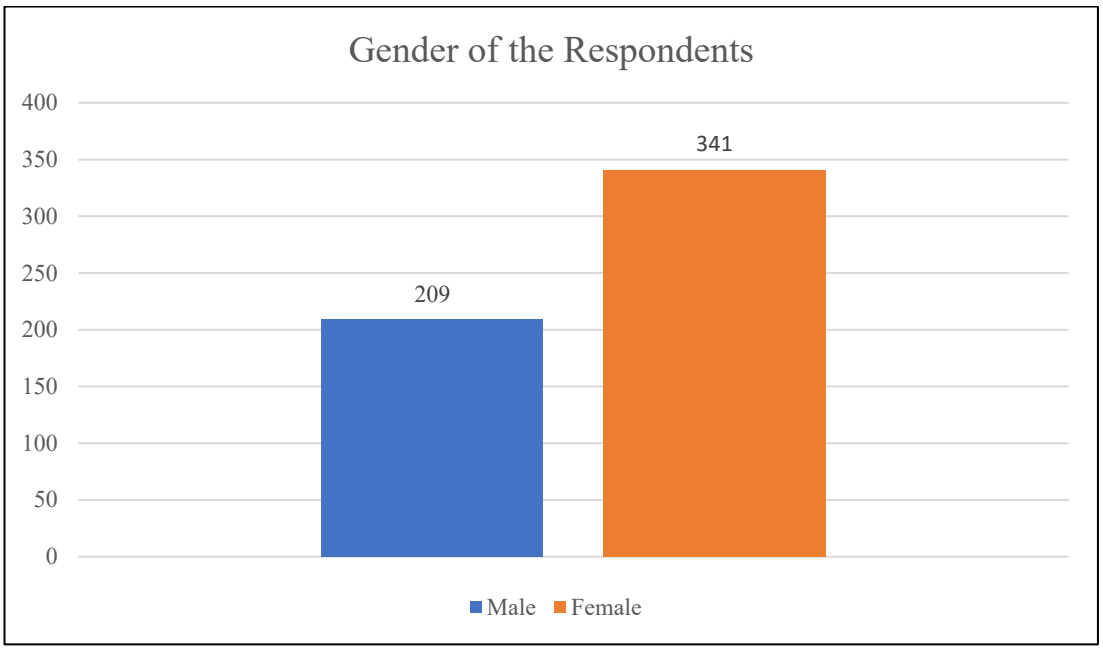


Figure 11: Chart showing the gender of the respondents

The age distribution shows that 112 respondents (20.36%) fall in the 15-25 age group, 189 respondents (34.36%) are between the ages of 26-35, 174 respondents (31.65%) are in the 36-50 age group, and 75 respondents (13.64%) are between 51-62 years old.

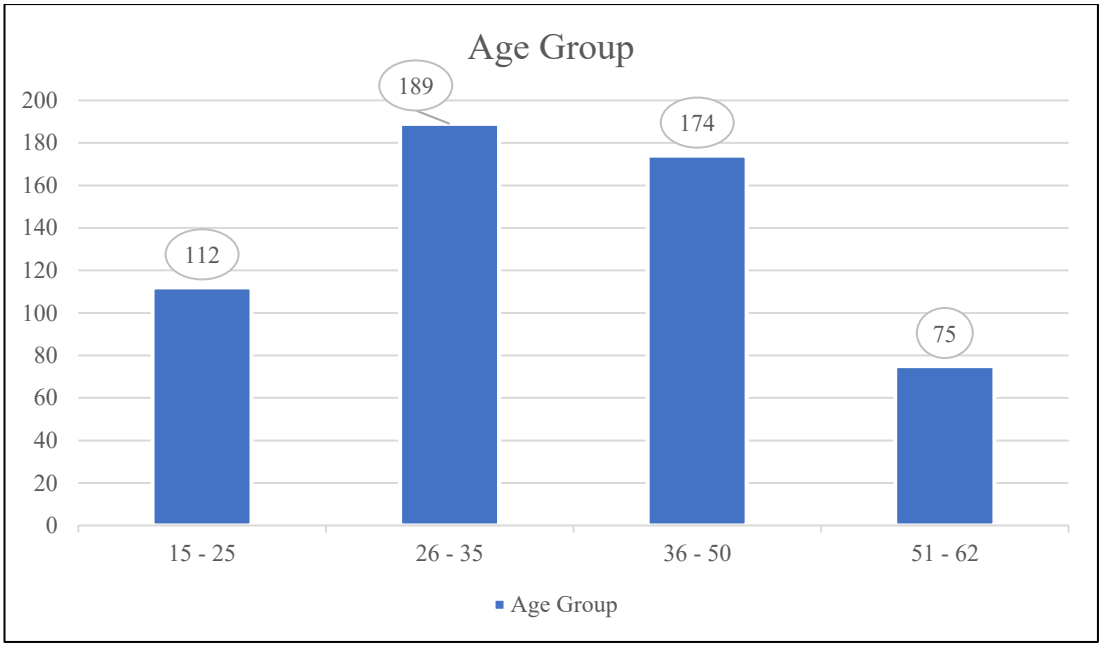


Figure 12: Chart showing different age group of the respondents

In terms of occupation, 78 respondents (14.18%) are government employees, 254 respondents (46.20%) work in the private sector (which includes labour or workers under private firms, entrepreneur, self – employed) 28 respondents (5.09%) are professionals (who are doing Professional work like Reverends, Doctors, Engineers, Paramedical workers), 32 respondents (5.82%) are students, and 157 respondents (28.56%) are unemployed.

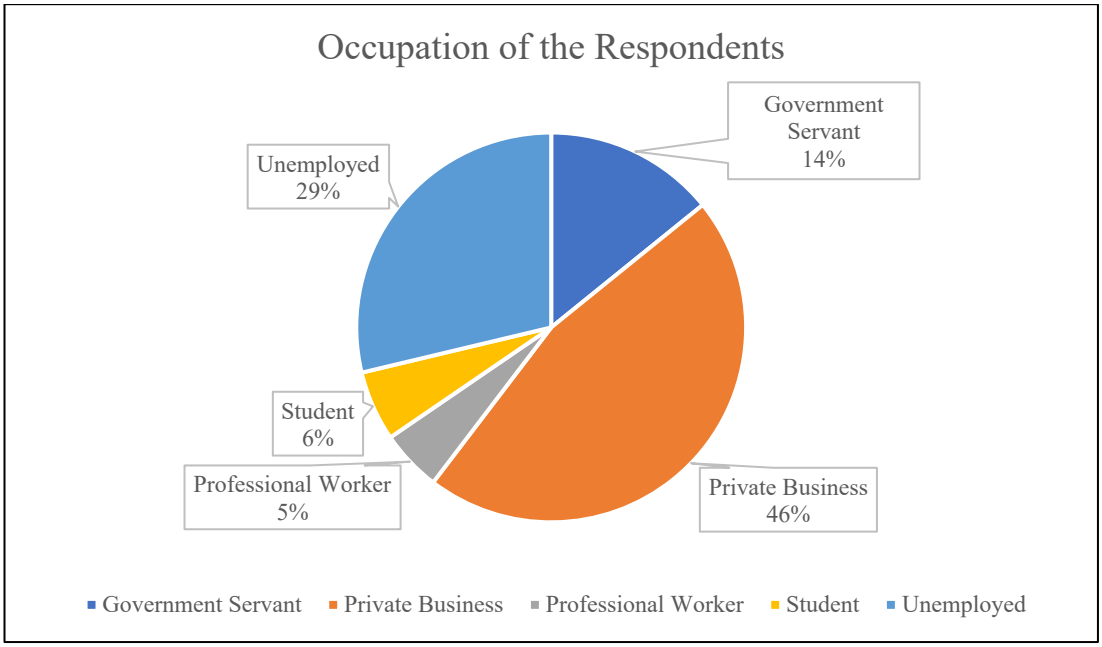


Figure 13: Chart representing the occupation of the Respondents

These are the educational backgrounds of the individuals who participated in the survey: There are 203 (36.93%) respondents who have a Bachelor's Degree, 147 (26.75%) respondents who have completed HSLC or below, 130 (23.67%) respondents who have an HSSLC qualification, and 70 (12.73%) respondents who have a Master's Degree.

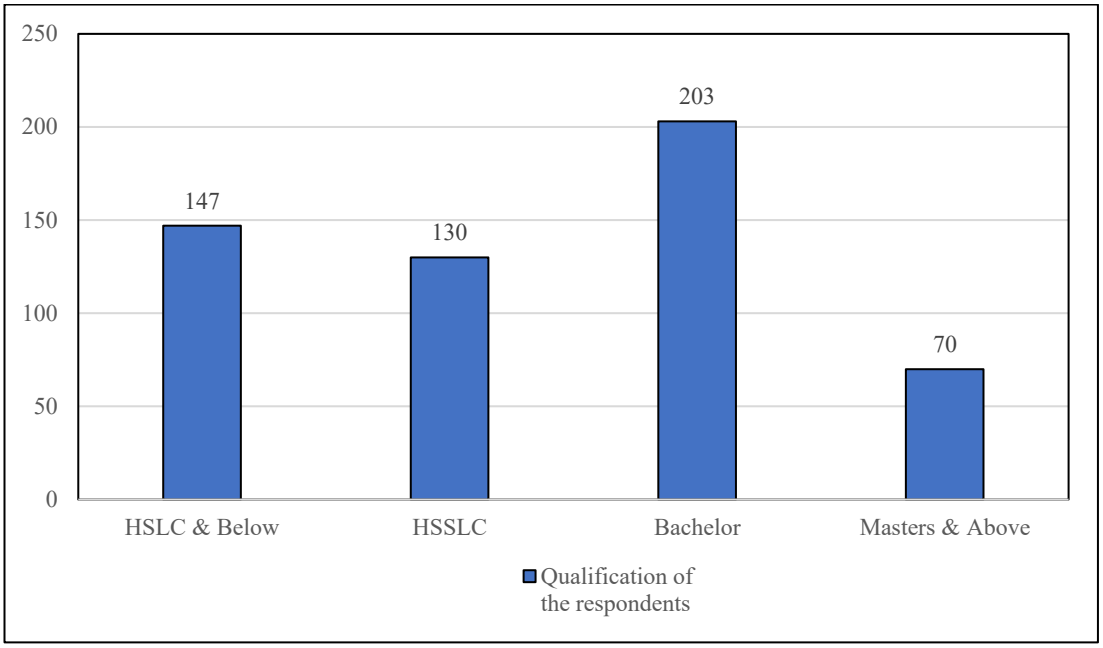


Figure 14: Chart representing the educational qualification of the Respondents

Table 5.2.1. Demographic Information of the Participants

Demographic Variable	Category	N	%
Gender	Female	341	62.01
	Male	208	37.82
	Other	1	0.18
Age	15-25	112	20.36
	26-35	189	34.36
	36-50	174	31.63
	51-62	75	13.64
Occupation	Government Employee	78	14.18
	Private Sector	254	46.20
	Professional	28	5.09
	Student	32	5.82
	Unemployed	157	28.56
Qualification	Bachelor's Degree	203	36.93
	HSLC & Below	147	26.75
	HSSLC	130	23.65
	Master's Degree	70	12.74

(Source: Field Work)

5.2.2. Awareness and Knowledge of E-governance (Table 5.2.2):

Table 5.2.2 represents the awareness and knowledge of e – governance.

In terms of awareness, 280 respondents (50.91%) have come across the term "electronic governance" or "e-governance," while 270 respondents (49.09%) have not heard of the term. The following chart substantiates the awareness of people on the e – governance concept.

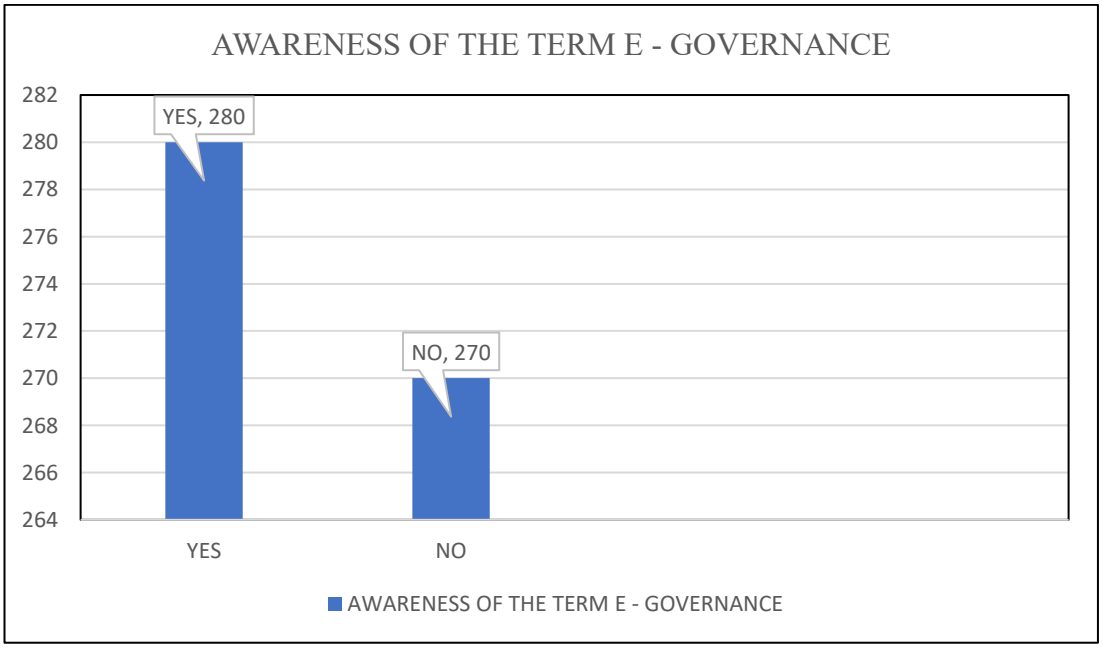


Figure 15: Awareness of the term e – Governance

When asked under which authority e-governance functions, 69 respondents (12.55%) stated the Department of IT, 59 respondents (10.73%) attributed it to the Mizoram Government, while 421 respondents (76.73%) had no idea. They are as represented in the following pie chart.

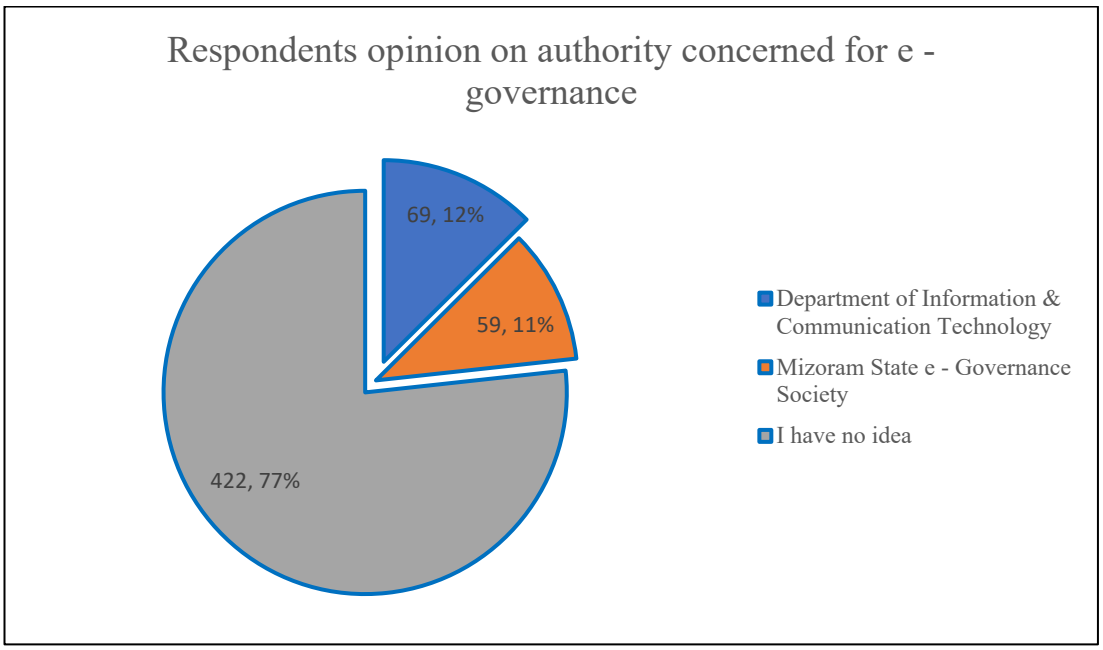


Figure 16: Pie Chart representing the respondents opinion on the authority responsible for the intervention of e – governance

Regarding knowledge of the Mizoram State E-governance Society (MSeGS) are as shown in figure 17. A total of 139 respondents (25.27%) indicated awareness, whereas 409 respondents (74.73%) were not aware. Information about e-governance was obtained through friends by 23 respondents (4.18%), advertisements by 6 respondents (1.09%), social media by 87 respondents (15.82%), news on TV by 81 respondents (14.73%), and newspapers by 51 respondents (9.27%).

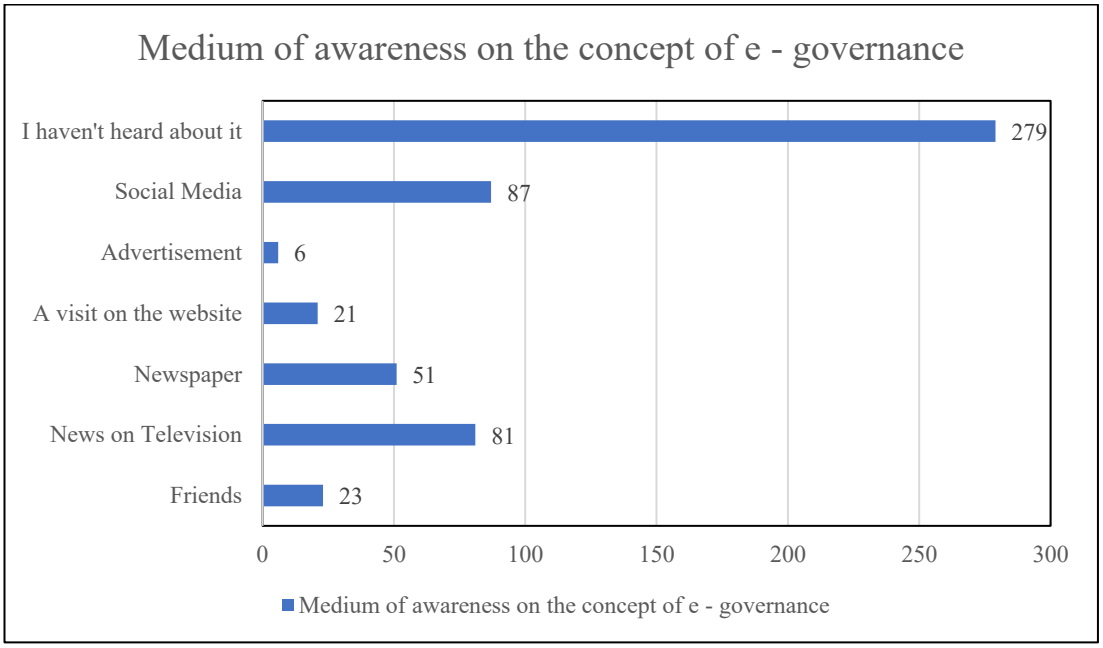


Figure 17: Chart representing the medium of awareness on the concept of e - governance

When asked about reasons for not hearing of e-governance, 261 respondents (47.45%) cited lack of interest, and 24 respondents (4.36%) mentioned the absence of proper information. On the question of what e-governance means, 113 respondents (20.55%) had no idea, 29 respondents (5.27%) associated it with online services, and 30 respondents (5.45%) believed it signified ease of interaction.

Table 5.2.2. Awareness and Knowledge of E-Governance

Question	Category	N	%
Have you come across the term "electronic governance" or "e-governance"?	Yes	280	50.91
	No	270	49.09
Under which authority does e-governance function?	Department of IT	69	12.55
	Mizoram Government	59	10.73
	I have no idea	421	76.73
Do you know Mizoram State E-Governance Society?	Yes	139	25.35
	No	409	74.65
Through which medium have you heard about e-governance?	Friend	23	4.18
	Advertisement	6	1.09
	Social Media	87	15.82
	News on TV	81	14.73
	Newspapers	51	9.27
If you haven't heard of e-governance, what is the reason?	I have no interest	261	47.45
	No proper information	24	4.36
What does e-governance mean to you?	I have no idea	113	20.55
	It means online services	29	5.27
	It means ease of interaction	30	5.45

(Source: Field Work)

5.2.3. Interaction with E-governance Projects and Government (Table 5.2.3):

In terms of awareness of government e-governance projects, 174 respondents (31.64%) stated they were aware, while 374 respondents (68.36%) were not aware of it. The specific e-governance projects known to respondents included the Inner Line Permit, recognized by 317 respondents (57.64%), E-District by 33 respondents

(6.00%), E-Bharat by 21 respondents (3.82%), and Mizoram by 50 respondents (9.09%).

Regarding the types of government interactions known, 111 respondents (20.18%) mentioned Government to Citizen (G2C) services, whereas 435 respondents (79.82%) indicated that they hadn't heard of any.

The sources through which respondents became aware of government policies include social media for 205 respondents (37.27%), news on TV for 246 respondents (44.73%), and newspapers for 21 respondents (3.82%). When asked if they knew they could interact with the government through online platforms, 449 respondents (81.64%) said yes, while 97 respondents (17.64%) said no.

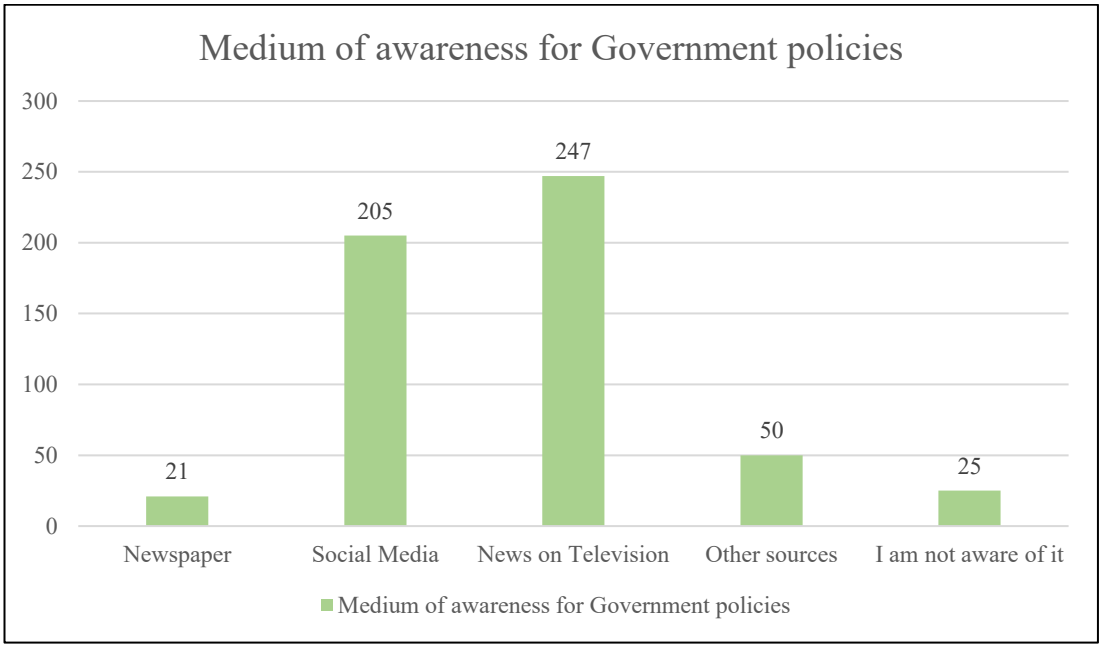


Figure 18: Chart representing the medium of awareness for Government policies

Regarding visits to government websites, 177 respondents (32.18%) reported visiting them frequently, while 371 respondents (67.45%) did not visit them. Among the websites frequently visited, 28 respondents (5.09%) mentioned MPSC Online, 29 respondents (5.27%) mentioned MSSSB, and 2 respondents (0.36%) mentioned the Health & Family Welfare website. The main purposes for visiting these websites were employment (59 respondents or 10.73%) and searching for information (74

respondents or 13.45%), while 375 respondents (68.18%) reported not visiting these websites at all.

Table 5.2.3. Interaction with E-Governance Projects and Government

Question	Category	N	%
Are you aware of Government e-governance projects?	Yes	174	31.76
	No	374	68.24
Specific e-governance projects known	Inner Line Permit	317	57.82
	E-District	33	6.02
	E-Bharat	21	3.83
	Mizoram	50	9.12
Types of Government interactions known	Government to Citizen (G2C)	111	20.18
	I haven't heard of any	435	79.82
How do you become aware of government policies?	Social Media	205	37.42
	News on TV	246	44.91
	Newspapers	21	3.82
Do you know you can interact with government through online platforms?	Yes	449	82.24
	No	97	17.76
Do you visit government websites frequently?	Yes	177	32.00
	No	371	67.00
Websites frequently visited	MPSC Online	28	5.13
	MSSSB	29	5.27
	Health & Family Welfare	2	0.36
Purpose for visiting websites	Employment	59	10.82
	Information search	74	13.55
	No visits	375	68.18

(*Source: Field Work)*

5.2.4. Opinion on E-governance and Online Interactions (Table 5.2.4):

The opinion on E – Governance and Online Interactions are as shown below in table 5.2.4

When asked if official pages were updated and informative, 127 respondents (23.09%) said yes, while 420 respondents (76.36%) said no. Regarding whether online interaction improved government services, 308 respondents (56.00%) felt that it had, while 239 respondents (43.45%) believed it had not. The following chart represents the opinion with this regard.

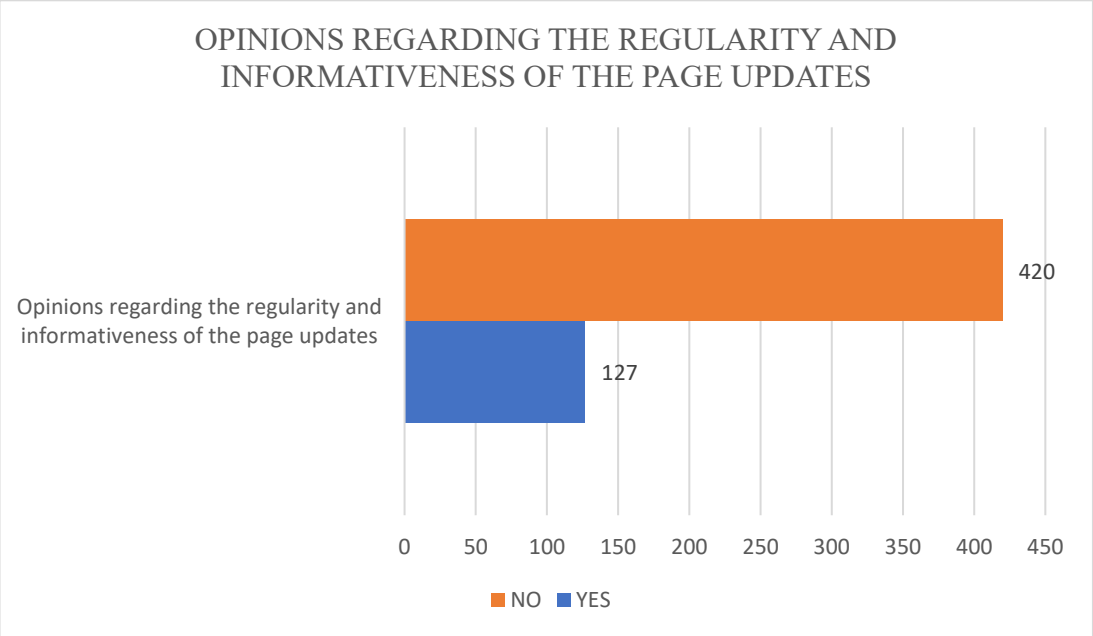


Figure 19: Opinions regarding the regularity and informativeness of the page updates

Concerning trust in online modes for interactions with the government, 302 respondents (54.91%) expressed trust, while 238 respondents (43.27%) did not trust the online mode due to the technical issue and data theft that are likely to occur. On the question of whether creating websites falls under e-governance initiatives, 178 respondents (32.36%) said yes, while 367 respondents (66.73%) said no as they are not aware of it. The following pie chart shows the responses with regards to trust in the use of the system.

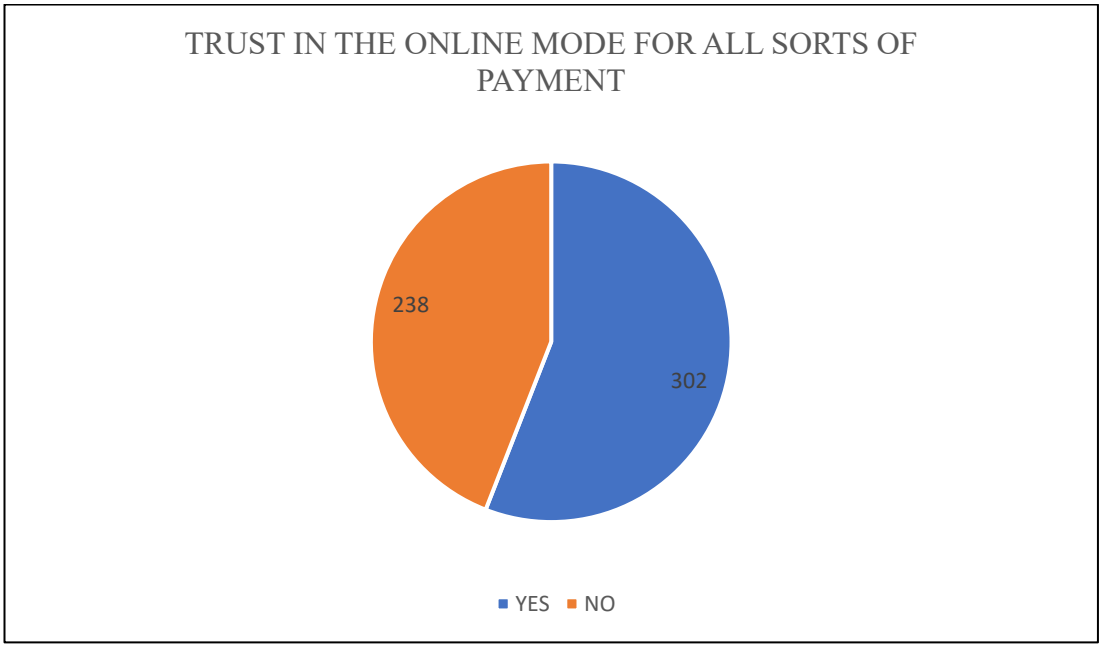


Figure 20: Trust in the online mode for all sorts of payment

Regarding the perceived impact of e-governance projects on citizen awareness and participation, 23 respondents (4.18%) believed they increased awareness, while 521 respondents (94.73%) did not believed that it have had any relation with the awareness. When asked if the use of online modes of interaction should be encouraged further, 499 respondents (90.73%) said yes, while 42 respondents (7.64%) said no.

In terms of the advantages of online interactions, 241 respondents (43.82%) found them very convenient, and 259 respondents (47.09%) believed they saved time.

Table 5.2.4. Opinion on E-Governance and Online Interactions

Question	Category	N	%
Do you think official pages are updated and informative?	Yes	127	23.27
	No	420	76.73
Has online interaction improved government services?	Yes	308	56.79
	No	239	44.21
Do you trust online modes for interactions with government?	Yes	302	55.90
	No	238	44.10
Do you think creating websites comes under e-governance initiatives?	Yes	178	32.09
	No	367	66.18
Do you think e-governance projects increase citizen awareness and participation?	Yes	23	4.18
	No	521	94.73
Should the use of online modes of interaction be encouraged further?	Yes	499	92.22
	No	42	7.78
What advantages does the use of online interactions bring to you?	It is very convenient	241	44.55
	It saves time	259	47.91

(Source: Field Work)

5.3. Discussion

The exploration of challenges faced by the government in implementing electronic governance (e-governance) shows significant gaps in administrative functioning and service delivery. While the data collected provides some positive insights, a closer analysis reveals troubling trends in terms of accessibility, citizen engagement, and the overall effectiveness of e-governance initiatives. The findings in relation to the study's

objectives can be discussed further, focusing on key themes such as demographic barriers, low awareness of e-governance, limited interaction with government projects, and deep-rooted dissatisfaction with online services.

The study's findings show a number of trends in citizens awareness in Mizoram's e-governance initiatives, though the data also suggests several areas where engagement remains limited or unclear.

1. Awareness and Knowledge of E-Governance

The fact that just over half of the respondents (50.91%) were familiar with the term "e-governance" may indicate that public awareness is growing, but the nearly equal portion of respondents (49.09%) who had not encountered the term suggests that these efforts may not have reached a significant part of the population. The data showing that 76.73% of respondents were unsure which authority manages e-governance could also indicate a lack of effective communication about how these initiatives are structured.

Similarly, the low level of recognition of the MSeGS, with only 25.27% of respondents aware of it, may indicate that this key nodal agency has not effectively communicated its role to the public. This could be a factor limiting deeper citizen engagement.

The study’s finding that social media (15.82%) and TV news (14.73%) are the main sources of information about e-governance may also indicate that these are the most effective channels for outreach. However, the fact that 47.45% of those unaware of e-governance attributed their lack of knowledge to a lack of interest suggests that simply increasing information is not enough. This shows that the government needs to make e-governance more relevant to everyday concerns or emphasise its practical benefits more clearly.

2. Interaction with E-Governance Projects and Government

The fact that only 31.64% of respondents were aware of specific e-governance projects may indicate that that citizens do not fully understand how these projects could benefit

them. The limited awareness of projects like E-District (6%) and E-Bharat (3.82%) shows that these services are either underused or not seen as essential by the people.

Nearly 80% of respondents were unaware of Government-to-Citizen (G2C) services. If such an important aspect of e-governance remains unfamiliar to so many, it may point to a disconnect between the government's intentions and the public's awareness or interest in engaging with these systems.

However, the finding also shows that that 81.64% of respondents knew they could interact with the government online show that the concept of e-governance is somewhat understood, even if the specifics are not. The fact that only 32.18% of respondents frequently visited government websites may indicate that while people are aware of online options, they may not find them particularly useful or accessible in practice.

3. Opinion on E-Governance and Online Interactions

In response to the question of whether or not online interactions have improved government services, the responses were divided, with 56% of respondents agreeing and 43.45% disagreeing. This may suggest that some citizens do see benefits, while others may not. Either this could be a reflection of different experiences with the quality or efficiency of these services, or it could be an indication that the benefits of e-governance are not perceived or distributed in the same manner by all individuals. In the same way, the data on trust in online platforms 54.91% of respondents expressed trust, while 43.27% did not may suggest that there are ongoing concerns regarding the reliability of these systems, as well as concerns regarding privacy and security. It is possible that this uncertainty will prevent implementation on a larger scale; however, addressing these concerns may result in increased trust and participation. There was a failure to clearly communicate the benefits of these initiatives or to demonstrate their impact on people's day-to-day lives, as indicated by the fact that only 4.18 percent of respondents believed that e-governance projects had increased citizen awareness or participation. Considering that nearly 95% of respondents did not believe that these projects would improve awareness or participation, it is possible that

there is a significant gap between the expectations of the government and the perceptions of the general public.

4. Perceived Benefits and Future Encouragement

The strong majority (90.73%) of respondents who supported further encouragement of online interactions might indicate that despite the current limitations, there is a general openness to the idea of e-governance. The data showing that 47.09% believe online services save time and 43.82% find them convenient may indicate that those who do use these services see practical advantages, even if overall usage remains low.

Overall, the study's findings show that while there is some awareness and support for e-governance in Mizoram, many challenges remain in terms of engagement, trust, and effective communication. The study findings show that citizens may not fully understand the benefits or functions of e-governance, and many are either unaware of or uninterested in the services offered. This means that there is a need for more targeted outreach and efforts to build trust in online government platforms. Without addressing these barriers, the potential for widespread participation in e-governance may remain unrealized.

5.4. ISSUES AND CHALLENGES

5.4.1. Demographic Barriers: Age, and Educational Divide

The data shows that the largest group of respondents falls within the 26-35 age bracket (34.36%), followed closely by the 36-50 age group (31.63%). While this seems promising as these age groups are typically more tech-savvy, it raises concerns about the significant proportion of older citizens (51-62 years, 13.64%) who may struggle with digital platforms. The needs of this older demographic appear to be overlooked in the current e-governance structure. Without targeted strategies to make digital services more senior-friendly, the government's initiatives risk alienating a significant portion of the population.

The educational divide further complicates the situation. While 36.93% of respondents hold a bachelor's degree, a substantial 26.75% have only completed high school or less. This suggests that a significant portion of the population may lack the digital

literacy required to engage with e-governance effectively. The government's failure to address varying levels of education risks creating an even more divided society, where the better-educated benefit from streamlined digital services, and those with lower educational attainment remain excluded from the process.

5.4.2. Alarming Levels of Low Awareness and Engagement

The government faces a significant obstacle in the form of limited awareness of e-governance, or more accurately, the absence of such awareness. A significant failure in communication and outreach is reflected in the fact that nearly half of the respondents, or 49.09 percent, are not familiar with the term "e-governance." More concerning is the fact that 76.73 percent of respondents are oblivious to the authority that is responsible for monitoring e-governance initiatives. Not only does this lack of transparency make it more difficult for citizens to access essential services, but it also makes it less likely that they will trust the system.

According to the findings, the Mizoram State E-Governance Society, which is the organisation that is responsible for promoting and managing e-governance, is almost completely unknown to the majority of the population (only 25.35 percent are aware of its existence). The inadequate visibility of e-governance initiatives is a significant factor that significantly undermines their effectiveness. An indictment of the ineffective outreach strategies that are currently in place is the fact that the government is having difficulty communicating the existence of its primary e-governance body. Additional flaws in the government's communication strategy are revealed by the channels through which citizens are gaining knowledge about e-governance. In spite of the fact that social media and television news are the most common sources of information, traditional media such as newspapers have very little impact (9.27%). The fact that 47.45% of respondents cite a lack of interest in e-governance as the reason for their unfamiliarity with the concept is, however, the more significant problem that exists. Based on this apathy, it appears that the government is not making an effort to demonstrate the significance of e-governance to the day-to-day lives of its citizens. No amount of information will be able to bridge the gap if people do not recognise the value in contributing to these services.

5.4.3. Limited Interaction with E-Governance Projects

Perhaps the finding that is most concerning is the low level of interaction with the e-governance projects that are already in existence. The fact that 68.24% of respondents are not aware of any government e-governance projects demonstrates that there is a significant gap between the efforts of the government and the awareness of the general public. In light of the resources that have been invested in these projects, this lack of knowledge is particularly concerning. It suggests that there has been a significant failure in publicising and promoting these respective initiatives.

There is a significant disparity in recognition even among those individuals who are aware of particular projects. The Inner Line Permit is the project that is the most well-known, as it is recognised by 57.82% of respondents. However, other significant initiatives such as E-District (6.02%) and E-Bharat (3.83%) are still largely unknown. This disparity in project visibility not only hinders the efficiency of these initiatives but also draws attention to more fundamental problems with the manner in which the government prioritises and communicates its digital services.

It is concerning that 67 percent of respondents do not visit government websites on a regular basis, despite the fact that 82.24% of respondents acknowledge that they are able to interact with the government online. Consequently, this indicates that awareness alone is not sufficient; citizens may be dissuaded from using these platforms due to difficulties in usability, dissatisfaction with the services, or a general lack of trust in the digital infrastructure of the government. The minimal number of interactions that take place online is indicative of a more widespread problem with the government's capacity to provide services that are dependable and easy to use.

5.4.4. Citizen Dissatisfaction and Lack of Trust

The public's perception of the efficiency of e-governance paints a picture that is unsettling. The staggering majority of respondents (76.73 percent) are of the opinion that official government websites are neither informative nor up to date. It is because of this lack of quality in digital content that citizens are less likely to engage with online services, which in turn erodes their trust in the system. The government's inability to maintain its online platforms is indicative of serious deficiencies in both

the allocation of resources and the prioritisation of tasks, which is particularly problematic in this digital age, where timely and accurate information is of the utmost importance.

In spite of these unfavourable perceptions, there is a paradoxical sense of optimism among the citizens. The majority of respondents (56.79%) are of the opinion that the delivery of services has been enhanced by the use of online interaction, and 55.90% of them have expressed some level of trust in the use of online interactions. This cautious optimism, however, is overshadowed by the significant portion of respondents who continue to maintain their scepticism that they have. There is a high probability that this trust will continue to deteriorate if there are not significant improvements made to the quality of digital services. This will make it more difficult for the government to achieve widespread acceptance of its e-governance initiatives.

5.5. Suggestions

It is possible to improve the efficiency of e-governance in Mizoram by putting into practice a number of different strategies that can be implemented to address the challenges that were revealed in the study. The goals of these strategies are to raise awareness, improve accessibility, strengthen trust in online services, and encourage greater participation from people of all demographics, particularly those who belong to marginalised groups.

E-governance initiatives are not widely known about, which is one of the most pressing problems that needs to be addressed. For the government to be successful in bridging this gap, targeted awareness campaigns need to be prioritised. Not only should these campaigns be designed to inform citizens, but they should also work to engage them by providing a clear explanation of the benefits that e-governance can bring to their everyday lives. Messages that are specifically tailored to specific demographics, such as women, older adults, and individuals without jobs, should be crafted in order to ensure that these groups are aware of how e-governance can improve their access to services and opportunities.

When it comes to communication, the government has the ability to make use of popular media platforms such as television and social media, both of which have been

shown to be effective strategies for reaching out to citizens. Increasing public awareness of the services that are available through e-governance can be accomplished by the government through the production of content that is both engaging and informative, such as video tutorials, infographics, and live interactive sessions. Furthermore, these channels ought to be updated on a regular basis with new information in order to address the concern that websites and pages associated with the government are currently perceived as being out of date and lacking in quality information.

Additionally, outreach efforts need to go beyond digital platforms in order to reach the significant number of citizens who are illiterate in digital technology, particularly in rural areas and among populations with lower levels of education. Community outreach programs that are organised at the grassroots level have the potential to be an efficient method of informing and educating these groups about e-governance. These programs may involve partnerships with local community leaders, non-governmental organisations (NGOs), and educational institutions in order to provide workshops, demonstrations, and support in the local languages. It will be essential to communicate culturally relevant content in a manner that resonates with the local context in order to successfully reach these audiences.

Accessibility is yet another important area that needs to be improved. Individuals who are younger and more proficient in technology are more likely to interact with e-governance. On the other hand, citizens who are older and have a lower level of education face greater difficulties when it comes to using digital platforms. The government ought to make investments in making its e-governance platforms more user-friendly, with simplified navigation, intuitive interfaces, and support for multiple languages, in order to guarantee that they are accessible to and accessible to all. Senior citizens and people with disabilities should be given special attention to ensure that services are easily accessible to them. This can be accomplished through the implementation of features such as voice commands, larger text options, and assisted digital help desks.

Enhancing the level of trust in electronic governance is another crucial area. Quite a few of the people who participated in the survey voiced their discontent with the

quality of the websites maintained by the government, including the fact that they are not frequently updated or informative. It is imperative that the government make investments in the regular updating of its digital platforms in order to combat this perception. This will ensure that all information is accurate, up to date, and helpful. Furthermore, transparency ought to be elevated to a higher priority. Through the publication of comprehensive information regarding the authorities responsible for various e-governance initiatives, the government can provide citizens with the opportunity to gain a deeper comprehension of the framework and procedures that underpin these services.

Furthermore, in order to build trust, it will be necessary to address concerns regarding the dependability of digital services and the safety of the internet. In order to accomplish this goal, the government ought to actively promote its efforts to protect personal data and guarantee the secure processing of transactions. The consistent dissemination of these measures will assist in reducing the concerns of citizens and fostering a greater sense of security when it comes to the utilisation of e-governance services.

In conclusion, in order to maintain engagement, the government must persistently provide opportunities for users to provide feedback. Creating a framework for e-governance that is more responsive to citizens' needs can be accomplished by establishing a system that enables citizens to share their experiences and suggestions. By actively listening to the feedback of citizens and incorporating their suggestions into future developments, the government can demonstrate its commitment to enhancing the delivery of services and addressing the particular requirements of its citizens.

Despite the fact that the current state of e-governance in Mizoram presents a number of challenges, it is possible to address these issues by taking measures that are both proactive and strategic. The government has the ability to significantly increase the effectiveness of its e-governance initiatives by increasing awareness, improving accessibility, cultivating trust, and encouraging engagement. This will ultimately ensure that all citizens are able to benefit from these advancements in the delivery of public services.

CHAPTER – VI

CONCLUSION

The final chapter included of three parts: replies to study questions, findings, suggestions. Since it integrates the literature on findings and recommendations from the entire thesis, this chapter represents the study's conclusion. Based on the research conducted in the earlier chapters, this last chapter aligns with the thesis's research questions. The results and recommendations that follow are explained in order. The chapter ends by outlining the research's shortcomings and how they may affect future investigations.

PART I: Answers to Research Questions

To elucidate and expand upon the study's objectives, efforts were undertaken to address the following questions –

Research Objective 1: To study the historical background of electronic governance and its various projects in Mizoram.

Research Question 1: What is the historical background of electronic governance and the various projects in Mizoram?

In order to study the historical background of e – governance and their various projects in Mizoram, both the primary and secondary sources of data had been utilized. The primary data had been obtained through an interview with the Chief Informatics Officer (CIO) and one Assistant Informatics Officer (AIO) from DICT. The interview had helped in gaining information about the development of DICT as a separate entity and how their work had become more fruitful through the birth of MSeGS as a nodal agency for e – governance. The secondary sources were obtained through the Department official report. The emergence of MSeGS as the nodal agency for implementing various e – governance projects could be traced from the birth of DICT in 2008. With regards to the historical background of e – governance, personal interview was administered with the officials of the DICT. Up until October 2004, the Department of Industry served as the primary department for the Department of Information and Communications Technology (DICT), which was operating under its

supervision. The job of Principal Informatics Officer (PIO) was established on November 8th, 2004, and it was filled by the individual who was serving as the Deputy Secretary at the time. This individual simultaneously held both roles. Prior to the establishment of the Directorate of Information and Communication Technology in October 2008, the Planning and Programme Implementation Department served as the central branch of government. It was conceived with the intention of establishing criteria for the conceptualisation, planning, execution, and monitoring of projects pertaining to information and communication technologies as well as e-government. The position of Head of the Department, which had previously been identified as Principal Informatics Officer, was elevated to the level of Chief Informatics Officer for the first time on November 20, 2012. Ever since its emergence, they have been implementing and evaluating projects from the Central Government as well as some initiatives have been carried out on their own.

Under the Central Government there are various central projects as well as mission mode projects which had to be fulfilled by the State through their nodal agency. So, in that case, the MSeGS in the state has been serving as an important tool in putting words into actions. It is under the purview of DICT that MSeGS has been carrying out projects and missions.

Currently, there are as many as 32 projects that has been carried out in the state. The main concerned of these projects is enabling better service delivery to the citizens as well as the workers. Many of the projects had been known to the people but an awareness on the projects is a necessity as the projects had not fully reached the target for which they are meant to be. So, in order to make it more successful, mass awareness campaign on their works is the need of an hour.

Research Objective 2: To evaluate how the digitalisation of office management has improved the administrative capability in selected departments under Government of Mizoram.

Research Question 2: How does the digitalisation of the office management enhance the administrative capability in selected Government offices?

In order to study whether the digitalisation of the office management enhances the administrative capability in selected Government offices, several key factors were studied. Digitalisation denotes the transition to utilising computers for operations previously executed manually. It entails the automation of tasks, electronic data storage, and the utilisation of software applications to enhance speed, efficiency, and accuracy in processes. It signifies substituting conventional, paper-based processes with digital technology.

The aspects for studying as and how it enhanced the administrative capability includes – Awareness and Adoption of digitalisation, Readiness and Barriers to Implementation, Impact on Government Operations, Employee Skills and Training Needs, Usage of Digitalisation Systems and Preferred Work Systems and Communication Modes.

The study shows that despite the high degree of awareness regarding digitalisation, there is a huge gap in its acceptance, as indicated by the fact that a major percentage of respondents, which accounts for 63.3% of the total, continue to rely mostly on traditional paperwork. It's possible that many offices are still stuck with paper-based solutions because of organizational resistance, difficulties with infrastructure, or simply because the comfort and familiarity of using paper prevents them from switching.

A hybrid model of working that demonstrates some degree of transition is indicated by the fact that 33.3% of respondents utilize a combination of paper and computer systems. This indicates that the hybrid model of working is prevalent. A number of offices are beginning to incorporate digital technologies alongside traditional means, maybe as a compromise solution. This underscores the fact that paper is still the predominant form of communication in many offices. Despite the fact that the idea of a paperless office is well-known, the fact that just 3.3% of offices are completely paperless implies that full application of this concept is still uncommon. In order to achieve a completely paperless environment, it may be necessary to make more extensive modifications to the infrastructure as well as a significant transformation in the culture of the office.

According to the results of the survey, forty-one percent (41%) of employers have already begun the process of implementing a digitalised system, while thirty percent (30%) of workplaces have not yet done so by this point. The existence of this gap implies that despite the fact that several businesses are aware of the benefits of digitalisation, they continue to face challenges in their efforts to fully adopt it. Inadequate technological infrastructure, insufficient skilled personnel, and budgetary constraints are all examples of potential obstacles that could arise. There may be ambiguity within companies, as indicated by the 29% of respondents who chose not to identify their implementation status. This may indicate that ongoing discussions are taking place regarding digital transformation, but no decisive actions have been made. There is also the possibility that it is an indication of a reluctance to acknowledge the fact that progress has been slow.

Although there are a variety of reasons for not adopting a digitalised or paperless system, the most common fear, which accounts for 21.9% of the total, is the possibility of the implementation being delayed or not being successful. It is possible that this is the result of insufficient initiative on the part of the leadership or the prioritization of alternative goals. Furthermore, 19% of respondents identified departmental priority concerns, which suggests that management may not consider digitalisation to be an urgent requirement. This is especially true if old methods are still considered to be effective.

Ten and a half percent (10.5%) of those who participated in the survey mentioned that the facilities were inadequate, highlighting the logistical challenges that could potentially delay adoption. The aforementioned may refer to computer systems that have become outmoded, internet access that is insufficient, or workspaces that are insufficient to accommodate digital tasks.

However, despite the fact that it is rarely brought up, the lack of computer skills (3.3%) continues to be a serious worry. In the event that individuals do not possess the necessary skills to operate computers in an effective manner, the deployment of digitalised systems will either be sluggish or fail. This demonstrates that there is an undeniable requirement for programs that create capacity and provide training. There may be a confluence of sensitive internal concerns, such as weak leadership and

an unwillingness to confront organizational deficiencies, which may be indicated by the considerable number of individuals (45.2% of the total) who chose not to disclose the cause.

The majority of respondents still rely on traditional paper-based solutions, possibly due to organizational resistance, infrastructure issues, or the comfort of using paper. A hybrid model of working is prevalent i.e., a combination of paper and computer systems. Challenges include inadequate technological infrastructure, skilled personnel, and budgetary constraints. 29% of respondents did not identify their implementation status, suggesting ongoing discussions but no decisive actions. The most common fear is the possibility of implementation being delayed or unsuccessful, possibly due to insufficient leadership initiative or departmental priorities. Facilities are also a concern. The lack of computer skills is a significant concern, highlighting the need for programs to develop capacity and provide training. Internal concerns, such as weak leadership and unwillingness to address organizational deficiencies, may also contribute to the slow adoption of digitalisation.

Research Objective 3: To evaluate the use of electronic payment system undertaken by Public Health Engineering Department (PHED) and Power & Electricity (P&E) Department, Government of Mizoram.

Research Question 3: How do the people in Aizawl city make use of the electronic payment system?

In order to substantiate research objective 3, research question had been framed. The focused of Objective 3 was studying the e – payment system with a particular reference to water and electricity bill payment In order to study the e – payment system, a total of 550 respondents had been selected from various residents within the Aizawl district.

Out of 550 respondents, a total of 548 responses have been received when the respondents were asked whether they are aware of the e – payment system. A total of 520 respondents i.e., 94.9% claimed that they are aware of the electronic mode of payment system. The remaining 28 respondents are not aware of the electronic mode of payment system, which accounts to 5.1% of the respondents.

When the respondents were asked whether they have utilised the e - payment for electricity bill payment, a total of 549 responses have been received and a large number of them i.e., 375 of them have utilise the e – payment system in paying their electricity bills as they find it to be more convenient for them. The remaing respondents i.e., 174 have not utilise the e – payment system in paying the electric bills.

When the respondents were asked whether they have utilise the e – payment system in paying water bills, 362 of the respondents give a positive response and the remaining 187 respondents do not use the system in paying water bills.

The results have shown that a total of 503 respondents i.e., 92.1% have known that the Government has maintain its own websites for paying water and electricity bills. The remaining 43 respondents have claimed that they are not aware of the availability of the concerning department websites.

The results have shown that the respondents have mostly use the Google Pay apps for making payments followed by the use of cash and other means like net banking, Phonpe, Paytm, BHIM SBI Pay, Department websites.

Majority of the respondents i.e., 509 of them consider it reliable enough to utilise the electronic mode of payment system while the remaining 38 respondents do not consider it reliable to be use for making payments mainly due to cyber security issues that has arisen from time to time.

The majority of respondents, namely 448, have trusted the system since their initial usage, whereas 89 respondents have not trusted the system from the outset.

The study reveals that 499 respondents are of the opinion that there has been an improvement in the electronic mode of payment system as compare to the initial days of usage. Fourty – one respondent are not aware of any changes in the system, while the remaining 6 respondents are of the opinion that there is not much improvement in the functioning and the usage of e – payment system.

Majority of the respondents i.e., 350 of them thinks that it is more efficient to continue the usage of the e – payment system and abort the traditional mode of payment, One

hundred and five (105) respondents are of the opinion that in our society the use of e – payment is not applicable in some instances, so, they think it is better to use both the system. Fifty-seven (57) respondents are of the opinion that it is not efficient to continue this type of payment system. The remaining 34 respondents do not have an idea.

The electronic mode of payment system have been utilise by the respondents for various other purposes like – payment of bill, fees which may be of personal matter. The e – payment system had also been used for shopping, doing business transactions and also for any other required purposes by the users.

Majority of the respondents i.e., 527 of them finds that the e – payment system is helpful and convenient for the users, while 25 respondents thinks that it helps to avoid queue in the Bank and ATM. They also think that it helps to reduce loss of cash as transactions could be done safely through this e – payment. On the other hand, there are few respondents who says that they are unable to have 100% trust on this system due to fear of probable technical and connectivity issues.

The reasons for not using the online mode of payment involves – dependency on others for paying of fees, being okay with the payment of paying using cash, fees are collected by NGO's and individuals in their locality, some of them do not have smartphone for doing online transactions and some of the respondents do not have any specific reason.

Research Objective 4: To evaluate the citizens awareness in the electronic governance process.

Research Question 4: How aware are the citizens in the e-governance process?

When the respondents are asked about their awareness on the term "electronic – governance," 279 of them says that they have heard of the term and the remaining 270 says that they haven't heard about it.

The respondents upon questioning whether they are aware of Mizoram State e – Governance Society (MSeGS), 409 of the respondents are not aware of the society and 140 were aware of the society in general.

When the respondents are asked about the medium through which they have come across the e – governance concept if they have already heard about it. Majority of them (87) have heard through discussions among peer groups and social media platform. 81 of them have heard through news on Television, 51 of them have heard through newspaper, 23 of them have heard through a friend, 21 of them have known the concept through a visit on the websites and 6 of them have come across the concept through advertisement. The remaining respondents haven't come across the concept.

When the respondents are asked about their reason for not having any knowledge on at least the concept itself, we come to know that it was mainly due to the fact that they have no concern about it. Other reasons include – poor information on the concept by authorities, they do not have any related use with regard to the topic, dependency on others for doing anything related to the internet, not enough publicity, do not have any platform to know about the concept.

The respondents are asked whether they knew that the Government has undertaken many e – governance project, 374 of them do not know about it and minority of them i.e., 174 respondents are aware that there is many e – governance projects going on at the moment.

In the questionnaire, a total of 32 of the e – Governance projects has been kept along with a checkbox and there is no project that are not being aware of by the respondents. The various e – governance projects are – Implementation of G – PON technology, e – district, inventory management system, content management system, district intranet connection, e – bharat, ease of doing business, inner line pass portal, interactive digital classroom, state data center, right to public service portal, state service delivery gateway and portal, common service center, Mizoram scholarship portal, online property return, MPSC Online, MSSSB Online, Power Billing, E – Roll for SEC, MCOVID – 19, Thenzawl Golf Resort, PWD Road Cutting, Revenue Tax, Fish Info, Mizoram Tourism, Leave Application Management System, RTI Online, Digital File Tracking System, Employment Exchange Mizoram, AB PM – JAY, Thulkhung and Land Tax & Zoram Chhiah Payment.

Majority of the respondents i.e., 247 of them are aware of the Government policies through the news on Television, 205 of them are aware through Social Media like Instagram, facebook and twitter. Twenty – one (21) of the respondents knew it through newspaper and other 50 respondents become aware of the policy through discussion among peer groups and public gathering.

Majority of the respondents i.e., 450 of them knew that they could interact and get information from the Government through the use of online. Some of the respondents i.e., 96 of them do not know that interactions could be made with the Government through online means.

The respondents are asked the means through which they are interacting with the government. From the study, we come to know that 246 respondents interact with the official and workers physically in the offices, while, 25 respondents interact through online and 114 of them are using both online and offline mode for interacting with the government. Meanwhile, 164 respondents do not make interactions with the government directly as they do not have any requirement to obtain from them.

Majority of the respondents i.e., 371 of them hardly visit the Government websites while 178 respondents have frequently visit them. The respondents are asked their purpose for visiting the websites, 75 of them have visited for job related and employment purposes while 74 of them have visited to get their needed information while there are 47 respondents who have use them for making job application, paying fees and taxes.

The survey reveals that 131 respondents obtained the information they required satisfactorily, but 418 respondents did not receive the desired information. Among the 418 responders, some are selecting 'No' since they do not visit at all.

The study shows 309 respondents believed that making of interactions available online have had a tremendous impact on the part of the officials and thus bring improvements in the maintenance of the websites. In the meanwhile, there are 239 respondents who do not think that there is any improvement brought about by making of interactions available online.

Research Objective 5: To study the problems and challenges face by the Government in the implementation of the electronic governance in the administrative functioning and the delivery of services to the citizens.

Research Question 5: What are the problems and challenges face by the Government in the implementation of the electronic governance system for delivery of public services?

The government's implementation of e-governance for public service delivery has been met with various problems and challenges. From issues of digital literacy to cybersecurity

There are many obstacles that need to be addressed. Additionally, the lack of infrastructure in certain regions may hinder the successful implementation of e-governance initiatives. Furthermore, bureaucratic resistance and outdated government processes can also pose challenges for transitioning to digital service delivery. Moreover, ensuring data privacy and protection is crucial when implementing e-governance systems to maintain public trust and confidence in the government's ability to securely handle sensitive information. Lastly, funding constraints and budget limitations may impact the scale and scope of e-governance projects, leading to delays or incomplete implementations.

Majority concerns, the transition to digital platforms has not been without its obstacles. This shift has also highlighted the need for infrastructure development and policy changes to ensure the successful integration of e-governance into the public sector.

E-governance refers to the use of digital technologies to provide government services and information to the public. While it offers a range of benefits such as improved accessibility, efficiency, and transparency, governments also face several challenges in effectively implementing e-governance for public service delivery. Some of the key problems and challenges are:

1. The data shows that the largest group of respondents falls within the 26-35 age bracket (34.36%), followed closely by the 36-50 age group (31.63%). While this seems promising as these age groups are typically more tech-savvy, it raises concerns

about the significant proportion of older citizens (51-62 years, 13.64%) who may struggle with digital platforms. The needs of this older demographic appear to be overlooked in the current e-governance structure. Without targeted strategies to make digital services more senior-friendly, the government's initiatives risk alienating a significant portion of the population.

2. The educational divide further complicates the situation. While 36.93% of respondents hold a bachelor's degree, a substantial 26.75% have only completed high school or less. This suggests that a significant portion of the population may lack the digital literacy required to engage with e-governance effectively. The government's failure to address varying levels of education risks creating an even more divided society, where the better-educated benefit from streamlined digital services, and those with lower educational attainment remain excluded from the process.

3. The awareness of e-governance, or rather the lack of it, represents a major challenge for the government. The fact that nearly half of the respondents (49.09%) are unfamiliar with the term "e-governance" reflects a significant communication and outreach failure. Even more worrying is that 76.73% of respondents are unaware of which authority oversees e-governance initiatives. This lack of transparency not only reduces trust in the system but also hinders citizens from accessing essential services.

4. The findings indicate that the Mizoram State E-Governance Society, the body tasked with promoting and managing e-governance, is virtually unknown to the majority of the population (only 25.35% are aware of its existence). This lack of visibility severely undermines the effectiveness of e-governance initiatives. The fact that the government is struggling to communicate the existence of its primary e-governance body is an indictment of the poor outreach strategies currently in place.

5. The channels through which citizens are learning about e-governance reveal additional flaws in the government's communication strategy. While social media and television news are the most common sources of information, traditional media like newspapers have little impact (9.27%). However, the more significant problem lies in the fact that 47.45% of respondents cite a lack of interest in e-governance as the reason for their unfamiliarity. This apathy suggests that the government is failing to demonstrate the relevance of e-governance to citizens' daily lives. If people do not see

the value in engaging with these services, no amount of information will bridge the gap.

6. The divided responses on whether online interactions have improved government services (56% agreeing, 43.45% disagreeing) may indicate that while some citizens see benefits, others may not. This may reflect differing experiences with the quality or efficiency of these services, or it could suggest that the benefits of e-governance are not equally distributed or perceived.

Similarly, the data on trust in online platforms, with 54.91% expressing trust and 43.27% did not, may indicate that there are ongoing concerns about privacy, security, or the reliability of these systems. This uncertainty may prevent broader adoption, and addressing these issues can result in increasing trust and participation.

Only 4.18% of respondents felt that e-governance projects had increased citizen awareness or participation, which may indicate a failure to clearly communicate the advantages of these initiatives or to demonstrate their impact on people's daily lives. The fact that nearly 95% of respondents did not see these projects as improving awareness or participation may suggest a significant gap between the government's expectations and the public's perception.

7. Many citizens, especially older adults and those with lower education levels,

may lack the skills required to navigate online platforms and services.Without proper digital literacy training, these individuals may struggle to access e-government services, leading to further exclusion.

8. Interoperability Issues

Government agencies may use different software and systems that are not compatible with one another, making it difficult to integrate and share data effectively across departments.

Lack of interoperability leads to inefficiencies, delays, and fragmented services, making it harder for citizens to access comprehensive and coordinated services.

9. Data Privacy Concerns

As e-governance involves the collection and processing of large amounts of personal data, concerns about how this data is handled, stored, and shared arise.

Public trust can be eroded if citizens feel their data is not being handled securely or ethically, leading to lower participation in e-governance initiatives.

10. Legal and Regulatory Challenges

In many cases, laws and regulations may not be updated to account for digital services. Additionally, issues such as cross-border data flows and online transactions can create legal complexities.

Outdated or unclear legal frameworks can hinder the effective functioning of e-governance and create legal uncertainties for both citizens and government agencies.

11. Political and Administrative Will

From the unstructured interview, we come to know that successful implementation of e-governance requires strong political will, collaboration across departments, and a clear vision. However, political instability, frequent changes in leadership, and bureaucratic inefficiency can derail e-governance initiatives.

Lack of commitment or coordination between different political and administrative entities can prevent e-governance projects from being fully implemented or sustained.

12. Lack of Skilled Workforce

E-governance requires a workforce skilled in IT, digital platforms, data management, and cybersecurity. In many cases, governments struggle to recruit or retain professionals with these specialized skills.

Insufficient technical expertise can lead to inefficient system management, security vulnerabilities, and poor service delivery.

Part II: Findings

1. The study on the awareness of **digitalisation** or **paperless offices** (97.6%) reflects a high level of knowledge about modern technological advancements in office settings. This finding indicates that, at least on a conceptual level, the idea of shifting

to digital or paperless systems has reached almost every participant. The remaining respondents (1.4%) who are unaware of the concept might represent a small group that is either not directly engaged in office technology systems or who have had limited exposure to discussions about digital transformation.
The 1% of respondents who chose not to disclose their awareness could indicate either uncertainty or unwillingness to engage, which may reflect a larger sentiment of resistance or disengagement from the conversation around technological changes in offices.

2. A significant portion (63.3%) of respondents still rely primarily on **traditional paperwork**, suggesting that despite the high level of awareness about computerisation, there is a substantial gap in its adoption. Many offices may still be entrenched in paper-based systems due to organizational inertia, infrastructure challenges, or simply the comfort and familiarity of using paper.
One – third of respondents (33.3%) use a **combination of paper and computer systems**, pointing to a hybrid model of working that suggests some degree of transition. This highlights that while paper is still dominant, many offices are beginning to implement digital systems alongside traditional methods, possibly as a compromise solution.

The small percentage of offices (3.3%) that are fully paperless suggests that although the concept of a paperless office is well-known, full implementation remains rare. Achieving a fully paperless environment could require more comprehensive infrastructure changes and a significant shift in office culture.

3. The survey indicates that while 41% of offices have begun to implement a

digitalised system, a large proportion (30%) still have not. This disparity suggests that even though there may be awareness of the benefits of digitalisation, many organizations face barriers to full implementation. These barriers could include financial constraints, lack of skilled personnel, or inadequate technical infrastructure.

The 29% who preferred not to disclose their implementation status could be indicative of uncertainty within organizations, where there may be discussions about digital

transformation but no concrete actions yet. Alternatively, it could reflect a hesitancy to reveal that progress has been slow.

The reasons for not implementing a digitalised or paperless system vary, but the most common issue (21.9%) is **delayed or non-implementation**. This could stem from a lack of leadership initiative or perhaps prioritization of other projects. Additionally, 19% of respondents cited **departmental priority issues**, suggesting that digitalisation may not be seen as an immediate necessity by management, especially if traditional methods are still perceived as functional.

The mention of **poor facilities** by 10.5% of respondents further highlights the logistical challenges that could hinder implementation. This could refer to outdated computer systems, lack of internet connectivity, or insufficient workspaces to support digital work.

Lack of computer skills (3.3%) is a less frequently cited issue but remains a critical factor. If employees do not possess the necessary skills to operate computers efficiently, the adoption of digitalised systems would be slow or ineffective. This presents a clear need for training and capacity-building initiatives.

The large portion (45.2%) that chose not to disclose the reason might reflect a combination of sensitive internal factors, ranging from poor leadership to a reluctance to acknowledge organizational failures.

4. The study reveals a generally positive picture regarding citizens' awareness in electronic governance, though there are areas that could benefit from improvement. Most people are quite familiar with electronic payment systems, with 94.3% saying they know about them. This high level of awareness is a strong indicator that digital payments have become an integral part of daily life for many. When it comes to how they learned about these systems, community groups and friends play a major role. About 52.8% of respondents got their information from community sources, while 37.3% learned from friends. In contrast, traditional media like television, social media, and newspapers have had less impact, with only small percentages of people citing these as their sources of information.
5. The study also shows that many respondents use electronic payment systems

for paying utility bills. About 68.9% use them for electricity bills, and 67.4% use them for water bills. Most respondents trust these systems, with 97.4% expressing confidence in their reliability from the start. In terms of technical skills, 97.4% know how to make online payments independently, reflecting a high level of competence.

6. When it comes to learning how to use these systems, most people figured it out on their own—75.1% learned through self-teaching. Only a small number relied on tutorials or guidance from friends and family. This suggests that while many people are adept at using these systems, there might be a need for more structured educational resources to help those who are less confident.

7. Despite the overall positive feedback, some respondents did experience issues. Around 8.3% reported problems with internet connectivity, and 5.7% encountered server or technical issues. However, a vast majority—80.8%—reported no problems at all. Most people believe that the functionality of e-payment systems has improved significantly over time, with 99% acknowledging this progress.

8. The awareness of e-governance, or rather the lack of it, represents a major challenge for the government. The fact that nearly half of the respondents (49.09%) are unfamiliar with the term “e-governance” reflects a significant communication and outreach failure. Even more worrying is that 76.73% of respondents are unaware of which authority oversees e-governance initiatives. This lack of transparency not only reduces trust in the system but also hinders citizens from accessing essential services.

9. The channels through which citizens are learning about e-governance reveal additional flaws in the government’s communication strategy. While social media and television news are the most common sources of information, traditional media like newspapers have little impact (9.27%). However, the more significant problem lies in the fact that 47.45% of respondents cite a lack of interest in e-governance as the reason for their unfamiliarity. This apathy suggests that the government is failing to demonstrate the relevance of e-governance to citizens' daily lives. If people do not see the value in engaging with these services, no amount of information will bridge the gap.

10. Although 82.24% of respondents acknowledge that they can interact with the

government online, the fact that 67.00% do not frequently visit government websites is alarming. This suggests that awareness alone is not sufficient—citizens may be deterred from using these platforms due to usability challenges, dissatisfaction with the services, or a general lack of trust in the government's digital infrastructure. The low frequency of online interactions points to a larger issue with the government's ability to deliver reliable and user-friendly services.

11. Public opinion on the effectiveness of e-governance paints a troubling picture. A staggering 76.73% of respondents believe that official government pages are neither updated nor informative. This lack of quality in digital content erodes trust in the system and discourages citizens from engaging with online services. In a digital age where timely and accurate information is critical, the government's inability to maintain its online platforms suggests serious shortcomings in both resource allocation and prioritization.

12. More than half (56.79%) believe that online interaction has improved service delivery, and 55.90% express some level of trust in online interactions. However, this cautious optimism is overshadowed by the significant portion of respondents who remain skeptical. Without substantial improvements in the quality of digital services, this trust is likely to erode further, making it harder for the government to gain widespread acceptance for its e-governance initiatives.

13. Market logic in e-governance can lead to inequality and reduced public access exacerbate social divides, and create barriers for marginalized groups. A balanced approach that prioritizes efficiency and social equity is crucial for e-governance to benefit all citizens. New Public Management principles, when applied to e-governance models, face criticism for overemphasizing market-based solutions and neglecting social goals and equity. A more nuanced approach is needed to ensure e-governance benefits all citizens. So, in the light of this need, Government of Mizoram also felt the need to make the system citizen – centric and make as many new projects on their own initiatives through MSeGS apart from taking initiative in carrying out Central Government projects. These projects has been made and carried out in order to make the citizens interact with the Government in the most convenient possible ways.

Part III: Suggestions

Implementing comprehensive digitalisation in government offices is a complex, multifaceted endeavour necessitating meticulous planning, explicit objectives, and resilient systems. Presented herein are recommendations for a holistic strategy to execute delivery of services through e – governance:

1. Mass awareness campaigns were the top suggestion (50.5%) for increasing system adoption, followed by improving facilities (31.4%). This shows that there is a need for both education and infrastructure investment to support digital transformation. To boost adoption, respondents recommended providing resources (31.4%) and training (20.5%). Other suggestions included policy changes and improved user support, which also shows a need for comprehensive strategies to address barriers. 47.1% of respondents identified government officials as crucial to successful implementation, emphasizing the need for leadership and policy support. Workers' roles (17.1%) and other factors (23.8%) were also noted, which indicates that there is a multifaceted nature of successful digital adoption that need to be looked further into.

2. There are several areas where improvements could enhance the effectiveness and adoption of electronic payment systems. A significant portion of respondents are unfamiliar with the Mizoram State e-Governance Society (MSeGS), even though they are aware of online payment systems. Improving awareness about such governance entities could help users better understand and engage with the electronic governance process.

3. Although many people learned to use e-payment systems on their own, there's an opportunity to provide more structured educational resources. Formal training or tutorials could help those who are less confident or new to digital payments, ensuring that everyone has the necessary skills to use these systems effectively. Also, a notable number of respondents cited fees associated with online payments and a preference for cash as reasons for not using these systems. Reducing transaction fees and highlighting the benefits of electronic payments could make them more attractive and accessible.

4. While many users reported no issues, a portion experienced problem with internet connectivity or technical glitches. Continued efforts to enhance the reliability and stability of e-payment systems could address these concerns and improve the overall user experience. The low impact of traditional media in spreading information about electronic payments may also mean that there might be a need for more effective communication strategies. Making use of various media channels, including social media and community-based outreach, could help reach a broader audience and improve information dissemination.

5. While the adoption of electronic payment systems is generally positive and growing, there are still gaps in awareness about specific governance bodies and barriers like fees and cash preference that need to be addressed. Overall, the progress is encouraging, but there's room for improvement to make these systems more accessible and widely accepted.

6. To address the challenges revealed in the study, several actionable strategies can be implemented to improve the effectiveness of e-governance in Mizoram. These strategies focus on increasing awareness, enhancing accessibility, improving trust in online services, and fostering greater engagement from all demographics, particularly marginalized groups. One of the most pressing issues is the lack of awareness surrounding e-governance initiatives. To bridge this gap, the government must prioritize targeted awareness campaigns. These campaigns should be designed to not only inform but also engage citizens by clearly explaining the benefits of e-governance in their daily lives. Tailored messages should be crafted for specific demographics, including women, older adults, and unemployed individuals, ensuring that these groups understand how e-governance can improve their access to services and opportunities.

7. In terms of communication, the government can capitalize on popular media platforms like social media and television, which have proven to be effective in reaching citizens. By creating engaging content such as video tutorials, infographics, and live interactive sessions, the government can increase public awareness of the services available through e-governance. Moreover, these channels should be updated regularly with new information, addressing the concern that government websites and pages are currently perceived as outdated and uninformative.

8. Given the significant number of citizens who lack digital literacy, especially in rural and less educated populations, outreach efforts must also extend beyond digital platforms. Community outreach programs, organized at the grassroots level, can be an effective way to inform and educate these groups about e-governance. These programs can involve partnerships with local community leaders, NGOs, and educational institutions to provide workshops, demonstrations, and support in local languages. Culturally relevant content, communicated in a way that resonates with the local context, will be crucial in reaching these audiences.

9. Another key area for improvement is accessibility. While younger, tech-savvy individuals are more likely to interact with e-governance, older citizens and those with limited education face greater challenges in using digital platforms. To ensure inclusivity, the government should invest in making its e-governance platforms more user-friendly, with simplified navigation, intuitive interfaces, and support for multiple languages. Special attention should be given to ensure that services can be easily accessed by senior citizens and individuals with disabilities, through features such as voice commands, larger text options, and assisted digital help desks.

10. Improving trust in e-governance is another critical area. A significant number of respondents expressed dissatisfaction with the quality of government websites, noting that they are not frequently updated or informative. To combat this perception, the government must invest in regular updates of its digital platforms, ensuring that all information is accurate, timely, and useful. Additionally, transparency should be prioritized. The government can publish detailed information about the authorities responsible for various e-governance initiatives, enabling citizens to better understand the structure and processes behind these services.

11. Building trust will also require addressing concerns about online security and the reliability of digital services. To this end, the government should actively promote its efforts to safeguard personal data and ensure the secure processing of transactions. Regularly communicating these measures will help alleviate citizen concerns and foster a greater sense of security in using e-governance services.

12. To sustain engagement, the government must continuously encourage feedback from users. Establishing a system that allows citizens to share their experiences and suggestions can create a more responsive e-governance framework.

By actively listening to citizen feedback and incorporating their suggestions into future developments, the government can demonstrate its commitment to improving service delivery and addressing the specific needs of its citizens.

In conclusion, while the current state of e-governance in Mizoram present several challenges, these issues can be addressed through proactive and strategic measures. By enhancing awareness, improving accessibility, fostering trust, and encouraging engagement, the government can significantly increase the effectiveness of its e-governance initiatives, ultimately ensuring that all citizens benefit from these advancements in public service delivery.

CONCLUDING REMARK

In the earlier Chapter i.e., Chapter I, had talked about the Gartner Model of e – Governance that is of practical importance in which there are four stages of e – governance. The first stage is "Presence" in which the availability of information on various Government platforms were talked about and not only that the flow of information is unidirectional. The second stage is "Interaction" where the interactions were made available between government and various parties. The means of communication is a two – way process in this stage and the interactions were made available in online mode. The third stage is "Transaction" phase in which online payments are made available to the Government and other variety of services. The last stage is "Transformation" phase in which optimum use of available technology for revolutionising the government services has been highlighted. So, upon taking this theory for consideration into the present study, we can say that we are in the transaction stage of Gartner Model of e – Governance and we are on the path of the "transformation". The challenges that were faced in order to make the transition were inadequate facilities, absence of a robust Internet, unreadiness on the part of the users.

This research set out to explore the electronic governance and service delivery in Aizawl District by administering a study on – the digitalisation of Government offices, e – payment of water and electricity bill, citizens awareness in e – governance. The study found that the Government offices have been operating in blended mode i.e.,

using papers and digital technology like computer and mobile phones for doing daily office work. Besides paper works, in emergency or urgent situation, email and whatsapp were often used as a means of communication. The Secretariat offices has been preparing itself for pilot study on e – office which was planned to be operated by mid – year of 2025.

The e – payment system has proved a lot of help to the users as it is very convenient and time – saving for them. E – payment has also been used for shopping and payment of certain other processing fees besides it is being used for paying water and electricity bills. But there are some drawbacks with the use of this system mostly due to unstable network connectivity and server error.

The study also found that the respondents were mostly aware of the projects of MSeGS by their name but were not aware that it has been a part of the projects that has been carried out by the nodal agency for the state i.e., MSeGS. When the respondents were asked their reasons for not being aware, the most common answer was that they do not have any concerned about the projects, while some are saying that there is no proper awareness about the use of the system and there are few who said that they have no specific reasons. From the respondents feedback, the study found that an important means to increased citizens awareness is increasing the efficiency in the work of the government employees in order to give a regular update on their websites and programmes. Increasing awareness of various Government initiatives among the citizens is believe to help in having more interests in it and thus increased awareness and participation. Also, utilising RTI, Government websites and service offered by the government for getting information and any other related matters will increase knowledge of the Government where about and the rights and privilege of the people itself. If one is aware of their rights, it will enable to be more active and thus ensure more involvement in any government function up to the extent of permission.

However, the study focused on few selected samples in the three cases studied limit the generalizability of the findings. Future studies should examine the technology and intervention of e – governance in the daily functioning of the Government and the people in a more diverse population to confirm these results and explore potential

intervention strategies. In conclusion, while the findings highlight a significant used and intervention of computer, e – payment and e – governance initiatives, further research is necessary to develop effective interventions that can help in improving the drawbacks.

Annexure - I

QUESTIONNAIRE FOR A STUDY ON

DIGITALISATION OF GOVERNMENT OFFICES

Instructions:

This questionnaire is to be used purely to fulfill my Ph.D. thesis, "Electronic Governance and Service Delivery: A Case Study of Aizawl District, Mizoram." The identity of the respondent is to be kept confidential. Therefore, I kindly request you to give an honest answer to ensure an effective result in this research study.

(S.LALTHANZUALI)

Ph.D. Research Scholar

Department of Public Administration

Mizoram University, Aizawl

Profile of the Respondent

1. Gender: Male/Female
2. Age: 15 – 25 ( ) 26 – 35 ( ) 36 – 50 ( ) 51 – 62 ( )
3. Locality:
4. Occupation:
5. Qualification:

1. Have you heard of the concept "Digitalisation of Offices" or "Paperless Office?"
   a) Yes
   b) No
2. The office work of the Department has been carried out through –
   a) Paper work filing system
   b) Paperless/Digitalisation
   c) Both
3. When do you start using the digitalisation of offices or paperless systems? (If it is being used)

   _____

4. What in your opinion is the reason for the system not being implemented? (If the system has not yet been implemented)
   a) Not yet strictly enforced by the Government
   b) Poor facilities
   c) There is no proper guideline for the usage
   d) Network problem
   e) The Department is not yet ready to utilise the system
   f) Malfunctioning of the system
   g) Computer Illiteracy
   h) Others
   i) I have no idea
5. Is there any plan on the use of Digitalisation of Office work? (If the system hasn't been used)
   a) No
   b) More likely to be use in the future
   c) I do not have an idea
6. Is internet connectivity available in the office?
   a) Yes
   b) No
7. Do you have a working knowledge on computer?
   a) Yes

b) No

8. Do you have the demanded qualification on computer knowledge by the Government?
   a) Yes
   b) No
9. Do you think that it is/will be helpful in the daily works of the Government?
   a) Yes
   b) No
   c) I have no idea
10. Do you think that the Government of Mizoram is/will be capable of using the system in its daily functioning?
   a) Yes
   b) No
11. Do you think that Government (in general) have enough awareness on the use of computers in order to fully adopt the system?
   a) Yes
   b) No
   c) I have no idea
12. Even though the implementation of the system has been partially carried out, does it reduce the paper consumption of the Government?
   a) Yes
   b) No
   c) I have no idea
13. Do you think that you will be able to operate the computer, if it is insisted by the authorities?
   a) Yes
   b) No
   c) Maybe
14. What is the reason responsible for the slow progress of digitalisation in Government offices?
   a) Poor internet connectivity
   b) Poor Power Supply

c) Lack of skills by the workers in order to use the system
d) Workers unwillingness to learn its usage
e) Poor facilities
f) Poor economy
g) Being comfortable in using the existing system
h) Others
i) I have no idea

15. Do you think that it is necessary and essential to implement this system in all the Government offices?
    a) Yes
    b) Not really
    c) I have no idea
16. Who in your opinion is necessary for the successful implementation of using the system?
    a) Head of each Department
    b) Workers at every level
    c) Only the specialised workers
    d) The Government in general
    e) All of the above
    f) I have no idea
17. What system of work do you prefer more?
    a) Paper filing system
    b) Paperless
    c) Both
    d) I have no idea
18. Which mode do you use for initiating business with other Department(s) at the official level?
    a) Paper
    b) Email
    c) Whatsapp
    d) Online Video Call
    e) Others

19. What applications / software do you mostly use for accomplishing office work?
    a) MS Excel
    b) MS Word
    c) Pagemarker
    d) Autocat
    e) Whatsapp Web
    f) MS Office
    g) Google forms
    h) We do not use any
    i) Others
    j) I am not aware of it
20. In your opinion, how much time will be required by office workers to be well - versed with digitalisation of office work?
    a) Most probably 5 - 10 years
    b) Can't say but it will require many more years
    c) Depending upon the frequency of training given on its usage
    d) I have no idea
21. What are the necessary measures to be taken up for popularising the use of the system in government offices?
    a) Mass awareness and training programme for the workers
    b) Having well - equipped facilities
    c) Demand on the use of the system by the Government
    d) Self - learning by the users
    e) Recruiting tech savvy personnel
    f) I have no idea
22. Do you think that it brings transparency in the work of the Department?
    a) Yes
    b) No
    c) Up to some extend only
23. Do you think that the Government is made more accountable to the people through this system?
    a) Yes

b) No
c) More or less the same

24. Do you receive more responses or applications in the works requiring online application as compared to the previous system of paper works alone?
    a) Yes
    b) No
25. Does it bring improvement in maintaining the website of the Department?
    a) Yes
    b) No
    c) More or less the same
    d) I do not have an opinion
26. Does the use of this system increase the visitor of the website?
    a) Yes
    b) No
    c) I have no idea
27. Does it make the workers to be more efficient in their performance?
    a) Yes
    b) No
    c) I have no idea
28. Is there any pressure on the part of the Department by the Government on using the system in their functioning?
    a) Yes
    b) No
    c) I have no idea
    d) Rather not say
29. In your opinion, what are/will be the advantages of using this system?
    a) Easy and convenient
    b) Increase in the speed of work load
    c) Reducing the stationery item consume
    d) Environment friendly
    e) Reduce money consumption by the Government
    f) It will help us to be more cautious in our work

g) I have no idea

30. In your opinion, what are/will be the disadvantage using this system?
    a) It is not secure enough for official work purposes due to cyber crime
    b) Unstable network connectivity
    c) Likely to cause health related issues
    d) Lack of technical skills by the workers
    e) Likely to cause unemployment due to less requirement of workers
    f) Our economy is incapable of using the system
    g) 100% usage is impossible as some works can be done through paperwork only
    h) Record keeping will be an issue on its initial usage
    i) Others
    j) I have no idea
31. What are your suggestion(s) to the Government in order to increase the usage or encourage the use of this system?
    a) Providing stable internet connectivity
    b) Providing the required facilities
    c) Organising fruitful training programmes
    d) Adequate financial support
    e) Increase awareness on the importance and advantages of using the system
    f) Issuing an order and strict enforcement by the Government
    g) Retirement of existing aged personnel
    h) Recruitment of usable tech savvy personnel
    i) Others
    j) I have no opinion

Annexure – II

QUESTIONNAIRE FOR A STUDY ON

USES OF E- PAYMENT SYSTEM IN AIZAWL

Instructions:

This questionnaire is to be used purely to fulfill my Ph.D. thesis, "Electronic Governance and Service Delivery: A Case Study of Aizawl District, Mizoram." The identity of the respondent is to be kept confidential. Therefore, I kindly request you to give an honest answer to ensure an effective result in this research study.

(S.LALTHANZUALI)

Ph.D. Research Scholar

Department of Public Administration

Mizoram University, Aizawl

Profile of the Respondent

1. Gender: Male/Female
2. Age: 15 – 25 ( ) 26 – 35 ( ) 36 – 50 ( ) 51 – 62 ( )
3. Locality:
4. Occupation:
5. Qualification:

1. Are you aware of the electronic mode of payment system?
   a) Yes
   b) No
2. At what instance do you come in contact with this concept?
   a) A friend
   b) News on Television
   c) Newspaper
   d) Social Media
   e) Other sources
   f) I haven't heard about it
3. Have you heard of Mizoram State e - Governance Society (MSeGS)?
   a) Yes
   b) No
4. Are you aware of the authority responsible for carrying out the online mode of electricity and water bill payment?
   a) Yes
   b) No
5. How long have you been aware of this online (e-payment) system? (Roughly)

   _____

   _____
6. Do you utilised the e - payment system in paying the electric bills?
   a) Yes
   b) No
7. Do you utilised the e - payment system in paying water bills?
   a) Yes
   b) No
8. Do you know that the Government has a website on its own to pay electricity and water bills?
   a) Yes
   b) No
9. Which method do you mostly use for making payments?
   a) Cash
   b) Credit/Debit Card
   c) Net Banking
   d) Google Pay
   e) Phonepe
   f) Paytm
   g) BHIM SBI Pay
   h) Others
10. Do you know how to make online payment on your own?
    a) Yes
    b) No
11. If you do know how to make online payment, how do you get to learn the use of this system?

a) Self – study
b) Through the help of others
c) Tutorial video

12. Do you consider that it is reliable enough to use the electronic mode of payment?
    a) Yes
    b) No
13. Do you trust the system in the initial day of your usage?
    a) Yes
    b) No
14. What are the issues that you are likely to encounter while using the e - payment system?
    a) Internet connectivity problem
    b) Server/Technical problem
    c) Others
    d) I do not have an issue
15. Do you find any improvement in the functioning and its usage over the years?
    a) Yes
    b) No
    c) I am not aware
16. Whom do you think are beneficial in using the system?
    a) Users/People
    b) Government
    c) Both
17. Do you think that the utility of this service is likely to increase in the future?
    a) Yes
    b) No
    c) I have no idea
18. Which application is most reliable to you in payment of bills?
    a) Gpay
    b) BHIM SBI Pay
    c) SBI Yono
    d) PhonePe
    e) Internet Banking
    f) Prefer to pay in cash
    g) Others
19. Do you think it is more efficient to continue the usage of e - payment system and abort the traditional mode of payment?
    a) Yes
    b) No
    c) It is better if we use both
    d) I have no idea
20. For what other purposes do you use the electronic mode of payment besides paying water and electricity bills?

a) Payment of fees, house rent, mobile recharge etc
b) Shopping
c) Business transaction
d) For any required purposes
e) I do not use much

21. What is your view on the electronic payment system?
    a) Helpful and convenient for users
    b) Helps to avoid queue in the bank and ATM
    c) Unable to have 100% trust due to probable technical and connectivity issues
    d) Reducing money lost as transaction could be done without cash
    e) Others
    f) I have no idea
22. What is your reason for using the online mode of payment system?
    a) Easy and convenient
    b) Transactions can be seen easily
    c) Avoidance of long queue in the bank and ATM
    d) Wide and popular usage by majority
    e) Others
23. What is your reason for not using the online mode of payment? (In case if you hardly use the e - payment system)
    a) Dependency on others for doing payments (Family members and friends)
    b) Fees are collected for earning by NGO's, individual, etc
    c) Being okay with using cash
    d) Others
    e) I do not have any specific reasons
24. Do you think that this system should be introduce for all sorts of payment system?
    a) Yes
    b) No

Annexure – III

QUESTIONNAIRE FOR STUDY ON

CITIZENS' AWARENESS IN THE ELECTRONIC GOVERNANCE

Instructions:

This questionnaire is to be used purely for fulfilling my Ph.D. thesis "Electronic Governance and Service Delivery: A Case Study of Aizawl District, Mizoram." The identity of the respondent is to be kept confidential. Therefore, I kindly request you to give an honest answer so as to get an effective result through this research study.

(S.LALTHANZUALI)

Ph.D. Research Scholar

Department of Public Administration

Mizoram University, Aizawl

Profile of the Respondent

1. Gender: Male/Female
2. Age: 15 – 25 ( ) 26 – 35 ( ) 36 – 50 ( ) 51 – 62 ( )
3. Locality:
4. Occupation:
5. Status in the society:
6. Qualification:

1. Have you come across the term "electronic governance" or "e - governance"?
    a) Yes
    b) No
2. In your opinion, under which authority does the e - governance functions?
    a) Department of Information & Communication Technology
    b) Mizoram State e - Governance Society
    c) I have no idea
3. Do you know Mizoram State e - Governance Society?
    a) Yes
    b) No
4. If you have known the e - Governance concept, through which medium have you heard the term?
    a) A friend
    b) News on Television
    c) Newspaper
    d) A visit on the website
    e) Advertisement
    f) Other Sources
    g) I haven't heard about it
5. If you haven't heard of the term e - governance, what is your reason for not having any knowledge?

    _____

    _____

6. What meaning does the term e - governance have in your opinion?

    _____

    _____

7. Do you know that the Government has undertaken many e - governance projects?
    a) Yes
    b) No
8. From the following e - governance projects, how many are you aware of?
    - E – District

- Implementation of G -PON technology
- Inventory Management System
- Content Management System (All Departments under GoM)
- District Intranet Connection
- E – Bharat
- Ease of Doing Business (Commerce & Industries Department)
- Inner Line Pass Portal (Home Department)
- Interactive Digital Classroom
- State Data Center
- Right to Public Service Portal (Department of Personnel & Administrative Reforms)
- State Service Delivery Gateway & Portal
- Common Service Center
- Mizoram Scholarship Portal
- Online Property Return
- MPSC Online
- Power Billling
- E - Roll for State Election Commission
- MCOVID – 19
- Thenzawl Golf Course
- PWD Road Cutting
- Revenue Tax
- Fish Info
- MSSSB Online
- Mizoram Tourism
- Leave Application Management System
- RTI Online
- Digital File Tracking System
- Employment Exchange Mizoram
- AB PM – JAY
- Thulkhung
- Land Tax & Zoram Chhiah Payment

9. How many types of Government interactions (through e - governance) are you aware of?
    a) Government to Citizen (G2C)
    b) Government to Government (G2G)
    c) Government to Employees (G2E)
    d) Government to Business (G2B)
    e) I haven't heard of any
10. How do you become aware of Government policies?
    a) Newspaper
    b) Social Media
    c) News on Television
    d) Other sources
    e) I am not aware of it
11. Do you know that you could interact and get information from the Government through the use of online?
    a) Yes
    b) No
12. In what way do you mostly interact with the government offices / officials?
    a) Offline
    b) Online
    c) Both
    d) None
13. Do you often visit the Government websites?
    a) Yes
    b) No
14. Which website (s) do you most frequently visit? (If you do visit any)

    _____

    _____

15. For what purposes do you frequently visit the website?
    a) Information purposes
    b) Educational purposes
    c) Employment purposes

d) Utilising its applications i.e., making applications, paying taxes/fees, etc
e) I do not visit

16. Are you given the requested information at your satisfaction level?
    a) Yes
    b) No
17. Do you think that their official pages are being updated and informative?
    a) Yes
    b) No
18. In what ways do you think that the online mode of interaction has made changes on the workers?
    a) It has made them to be more efficient in their work
    b) It has made them to be more sincere in their work
    c) It has made them become more negligent
    d) Information and data are delivered at faster pace
    e) I have no idea
19. Do you think that the Government, by giving services through online has bring improvement in the maintenance of the websites?
    a) Yes
    b) No
20. Do you trust the online mode for doing for all sorts of interactions?
    a) Yes
    b) No
21. Do you that creating of websites, applications, etc comes under the initiatives of e - governance?
    a) Yes
    b) No
22. Do you know that being concern about the Government policies and activities is an innovative way for citizens awareness/participation in the governance?
    a) Yes
    b) No

23. Do you think that we are well aware of the fact that the e - governance projects are a means to provide benefit and increase the level of awareness/participation for the citizens?
    a) Yes
    b) No
24. Do you think that the use of online mode of interaction should be encourage further more?
    a) Yes
    b) No
25. What advantages does the use of online system of interactions brought to you?
    a) It saves time and energy
    b) It enhances transparency in the services
    c) Work has been accomplished faster
    d) It saves money
    e) It is very convenient for users
    f) Since I do not use much, I have no idea
26. What are the disadvantages of having an interactions with the Government through online?
    a) No internet access
    b) Poor internet connectivity
    c) Error in the webpage/server
    d) Websites are not properly updated
    e) Delay in the response
    f) Trust in face - to - face interactions
    g) I have no idea
27. In your opinion, what are the ways to popularise and increase citizens awareness/participation?
    a) Creating awareness training programme on various Government initiatives
    b) Displaying more of Government prominent schemes in the hoardings
    c) Making more commercial Advertisement on television and newspaper

d) Using social media like Instagram, facebook, etc for creating awareness
e) I do not have an opinion

Annexure - IV



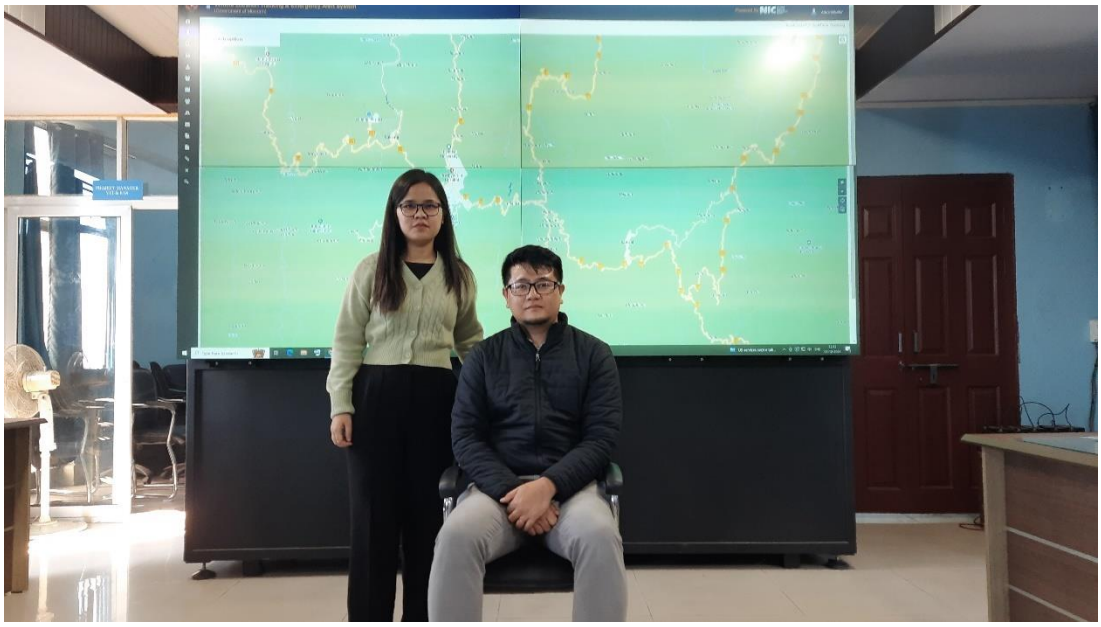
Interview with Lalthantluanga Khiangte, System Analysts, PHED



Interview with Zohmingthangi Fanai (MSS), Under Secretary, SERI PHE



Interview with Lallungmuani, Superintendent (E), P&E Department



Interview with Benjamin Vanlalhmangaiha Sailo, Assistant Director (MVI), Transport Department



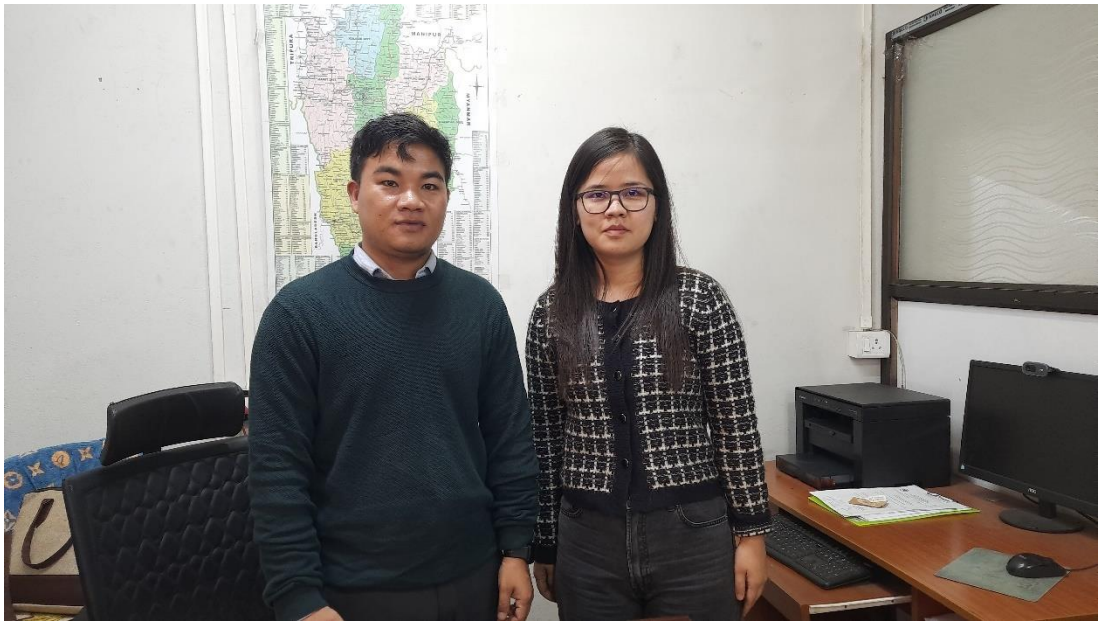
Interview with Lalchhanchhuaha, Superintendent, DP&AR (TRG)



Interview with Lalbiakhluni (MSS), Deputy Director, DICT



Interview with Isaac Zothanpuia, Project Manager, MSeGS



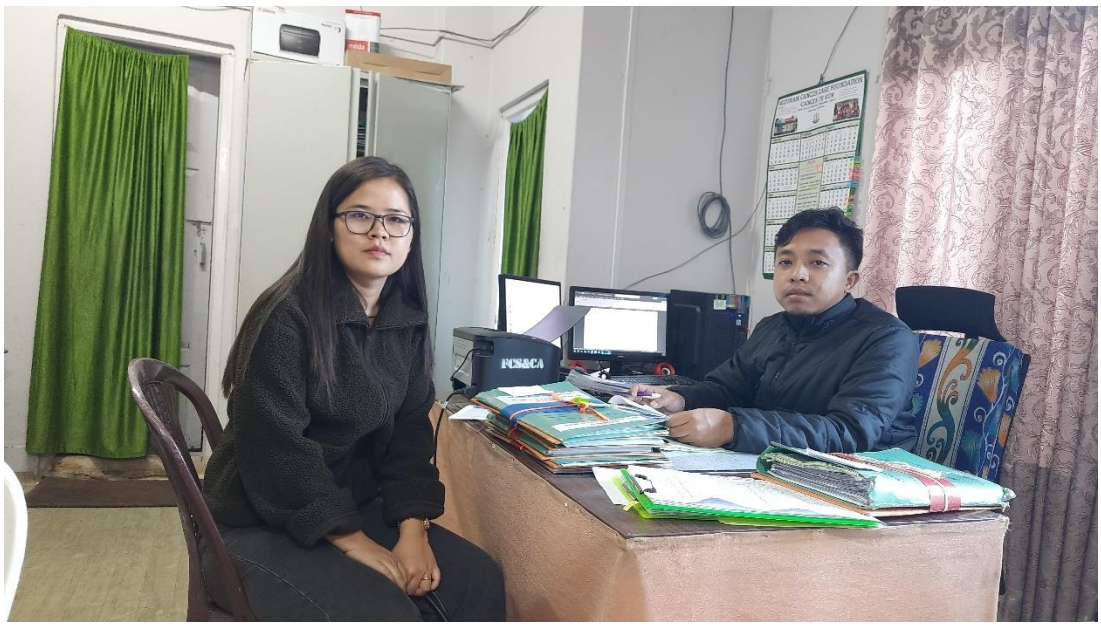
(*Interview with H.Lalengzaua (MPESS), Research Officer, P&PI Department)*



(*Interview with R.Lalhmangaihi, Superintendent, UD&PA*)



(*Interview with Simon Rosangliana, Assistant Director, Agriculture Department)*



(*Interview with Remeses Hualhlunchhunga, Assistant, FCS& CA* Department)



(Interview with Andrew H.Lalremruata (MIS), Deputy Director, DIPR)

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BIO-DATA

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EDUCATIONAL QUALIFICATION

Educational Qualification	**Division**	**Board / University**
HSLC	1 division	Mizoram Board of School Education
HSSLC	1 division	Mizoram Board of School Education
B.A.	1 Division	Mizoram University
M.A.	1 Division	Mizoram University

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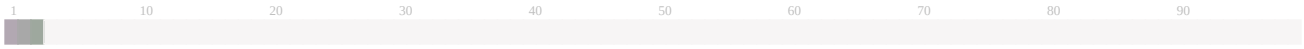
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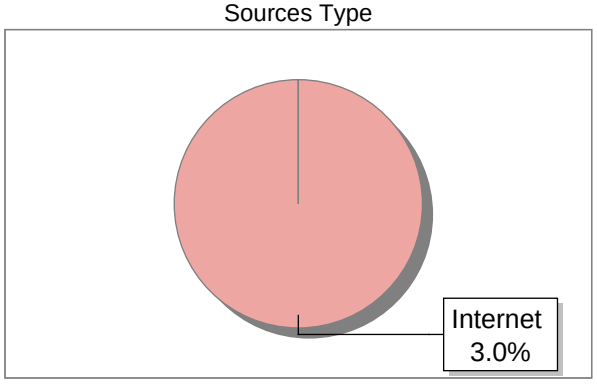
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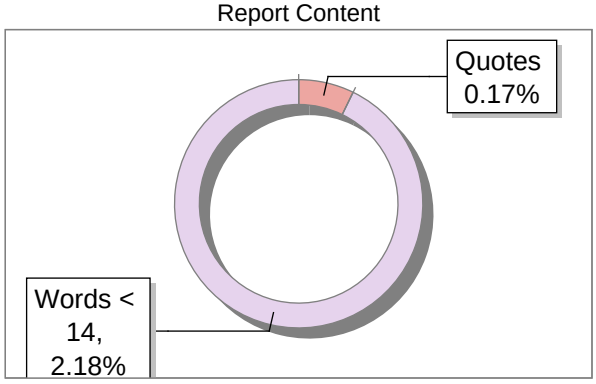
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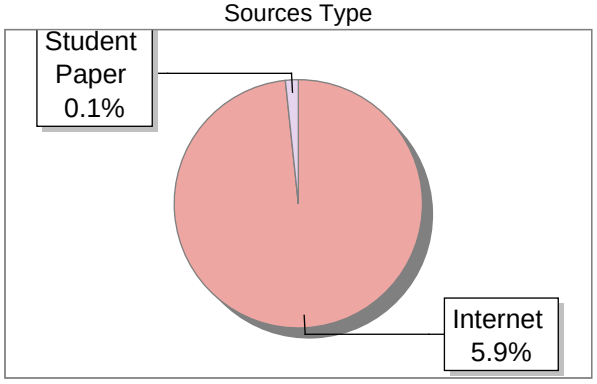
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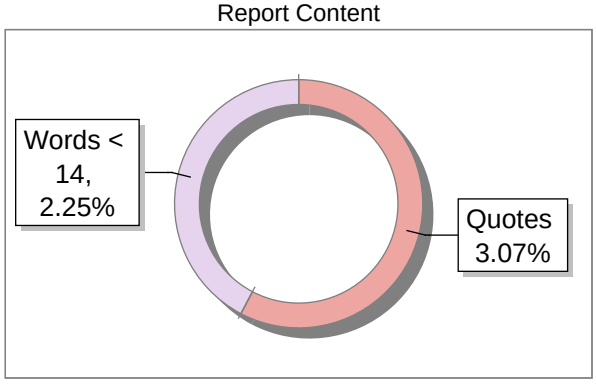
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Administrative Reforms Through E-Governance in India

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ABSTRACT

A well-planned and up-to-date administrative machinery is the need for every government to prosper and a reform on its structure and functioning is required for it to be efficient and effective. The feeling of dissatisfaction, inadequacy and inefficiency in the performance of any administrative structure pressurize the need for improvement and reforms in it. Thus, reforms from the administrative point of view refers to the response to the challenges that has arisen out of the failure. Various types of administrative reforms were introduced by Government of India before and after Independence and Administrative Reforms Commission had been set upsince 1966 in order to promote efficiency and transparency and thus eliminate corruption and improve malfunctioning of the government in the meantime. The Administrative Reforms Commission has been set up in order to review the administrative system and give recommendations for its improvement. The major concerned of the Administrative Reforms Commission are Right to Information (RTI), political ethics, financial management, e-governance, combating terrorism. Electronic Governance (E-Governance) has been the most efficient tool of reforms as it has improved the functioning of the government through the application of Information Technology so as to bring about efficiency and transparency and further play a vital role in the attainment of the goals of the government.

Key Words : Administrative Reforms, Efficiency, E-Governance, Information Technology

INTRODUCTION

Administrative reforms had been defined by Gerald E. Caiden as, "the artificial inducement of administrative transformation against resistance."[1] F.W. Riggs has defined administrative reforms as, "it is an administrative development which is concerned with the growing capacity of administrative systems to make choices and exercise discretion to bring about changes in environment by deliberate and conscious decisions."[2] The major concern of administrative reforms of India have been highlighted by Ramesh K. Arora and Rajni Goyal as under:[3]

1. Enhancement of efficiency and economy.
2. Updating administrative technology.
3. Creation of new institutions to undertake additional functions of administration.
4. Stressing structure and functional specialization.
5. Redesigning of Administrative structures with a view to enhancing their effectiveness.
6. Improving intra – agency to prevent frittering away of resources and facilitating a concerted action for goal achievement.
7. Rationalizing the personnel system in a manner that could promote merit – oriented recruitment and performance– based career development.
8. Ensuring higher level of integrity in public services and tightening the control and surveillance system.
9. Inculcating and sustaining in the administrative

1. Caiden, G.E. (1969). *Administrative Reform.* Chicago. 8.

2. Avasthi, A., Avasthi A.P. (2019). *Indian Administration.* Agra: Lakshmi Narain Agarwal. 403.

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system a spirit of responsiveness to people's needs and ensuring adequate accountability of government organizations.

10. Strengthening the bases of decentralization, delegation and democratization in administration at the macro as well as the micro levels.

The administrative reforms process had begun even before independence. In the discipline of Public Administration, the administration reforms process had begun way back in 1887 through the works of Woodrow Wilson *i.e.*, "The study of administration" which talked about how the administrators must be given power in order to carry out their duties effectively and efficiently. F.W. Taylor's "Scientific Management" during 1910's had become another landmark in the administrative reforms as its concerned were the application of scientific methods in the managerial process and production methods so as to bring about efficiency. But this method was criticized on the ground that its main focus was on the work only and neglect human factor. This system was criticised and replaced by another administrative theory i.e., Human Relations Theory by Elton Mayo which conducted the Hawthorne experiment which study the relationship between the workers behaviour and productivity in relation with the working conditions. The major administrative reforms before India's Independence are:

1. The Macaulay Committee to conduct Public Service Examination, 1854
2. The Special Committee on Civil Services salary, 1860
3. The Committee on the selection and training of candidates for Indian Civil Service, 1876
4. The Aitchison Commission (Public Service Commission), 1886 – 87
5. The Government of India Clerk's Salaries Committee, 1908
6. The Royal Commission Upon Decentralization, 1907 – 09
7. The Islington Commission on the Public Service in India, 1912 – 15
8. The Llewellyn Smith Committee, 1919
9. The Lee Commission, 1923 – 24
10. The Wheeler Committee: The Government of India Secretariat Reorganisation Committee, 1936
11. The Maxwell Committee: The Government of India Secretariat Committee, 1937
12. The Tottenham Committee: The Government of India Secretariat Committee, 1945 – 46

According to Ramesh K. Arora, the administrative reform activities since India's Independence to present can be divided into three periods for the purpose of analysis:[4]

The period of consolidation (1947 – 1966):

As many as eighteen (18) committees had been formed during this period and amongst these the most important committees are:

(i) Secretariat Reorganization Committee, 1947 was set up under the chairmanship of Girja Shankar Bajpai. This committee examined the functions of Government departments whose top priority was their relative and further suggested the change in the working procedure of the government. It also suggested the utilization of the Indian Civil Servants to a great extent possible in order to prevent shortage of workers and even suggested the creation of Directorate of Methods, Organization and Training at the Union government.

(ii) Aayangar Committee, 1949. In order to promote efficiency and economy, the committee had suggested the establishment of changes in the organizational set up. As a result of which the Defense Committee, the Economic Committee, the Parliamentary and Legal Affairs Committee and the Administrative Organization Committee had been created.

(iii) Paul Apple by Report, 1953 and 1956. The then Finance Minister C.D. Deshmukh had appointed Paul H. Appleby, the famous public administrator in USA to do a research on the Public Administration system in India and submitted his report of it. The submitted report in 1953 had suggested the establishment of Indian Institute of Public Administration at New Delhi and the setting up of Organization and Management (Methods) department in the central government.

3. Arora, R., Goyal, R. (2012). *Indian Public Administration: Institutions and issues*. Delhi: New Age International Publishers.

4. Arora, R.K. (1999). *Indian Administration: Perceptions and perspectives.* Jaipur: Aalekh Publishers. 235 –242.

(iv) The Santhanam Committee on Prevention of Corruption, 1964 had strongly recommended the establishment of the Central Vigilance Commission by the Central and State governments.

The period of reconstruction (1966 – 1980):

During this period five (5) committees/ commission were established, they are– The Administrative Reforms Commission, 1966 – 77; The third pay commission, 1970 – 73; Committee on Recruitment policy and selection methods; Ashok Mehta Committee on Panchayati Raj Institution, 1977; and National Police Commission, 1977 – 80.

The period of modernization (1980 – till date):

There were fifteen committees/ commission upto the Seventh pay commission in 2014. Some of the most important commission or committees during this period includes Economic Administration Reforms Commission (1981 – 85), Sarkaria Commission on Central State relations (1983 – 87), Chellah Committee on tax reforms (1991 – 92) and Second Administrative Reforms Commission (2005 – 2009).

The Second Administrative Reforms Commission was constituted under the Chairmanship of Veerappa Molly on 31st May, 2005. The commission was established in order to bring reforms in the administrative machinery, thereby making the government accountable, responsible, proactive, sustainable and efficient at all levels. The Second Administrative Reforms Commission has presented fifteen (15) reports to the government and they are as given below:[5]

1. Right to Information: Master key to good governance (June 2006)
2. Unlocking human capital: Entitlement and Governance – A Case study (July 2006)
3. Crisis Management: From Despair to Hope (September 2006)
4. Ethics in Governance (January 2007)
5. Public Order: Justice for each…peace for all (June 2007)
6. Local governance (October 2007)
7. Capacity building for conflict resolution: Friction to fusion (February 2008)
8. Combating terrorism: Protecting by righteousness (June 2008)
9. Social Capital: A shared destiny (August 2008)
10. Refurbishing of Personnel Administration: Scaling new heights (November 2008)
11. Promoting e – governance: The smart way forward (December 2008)
12. Citizen centric administration: The heart of Governance (February 2009)
13. Organisational structure of Government of India (April 2009)
14. Strengthening Financial Management System (April 2009)
15. State and District Administration (April 2009)

The eleventh report of the Second Administrative Reforms talk about promoting e – governance which is an important tool for administrative reforms. The 'e' in e – governance stands for electronic and it refers to the application of Information and Communication Technology (ICT) in the process of governance in order to promote efficiency, transparency, better accessibility and delivery of government services. According to UNESCO, E – Governance may be defined as, "any activity performed in the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public and other agencies and for performing government administration activities."[6] The goals of e – governance that aims to bring about Simple, Morale, Accountability, Responsive and Transparent (SMART) governance is likely to help in the attainment of good governance. The major characteristics of good governance are:[7]

1. *Participation*: It involved the participation of the citizen either directly or through representatives.
2. *Consensus – oriented*: It involved taking into consideration a broad consensus on any matters and then finding and serving the best possible solutions for the interest of all. In order to

5. Sapru, R. (2018). *Indian Administration: A foundation of Governance.* New Delhi: SAGE Publications India Pvt. Ltd. 393 – 394.

6. Sumathy, M. (2020). *A Handbook of e – governance in India*. New Delhi: Abhijeet Publications. 22.

7. Raj, B.S. (2008). *E – governance techniques: Indian and Global experiences*. New Delhi: New Century Publications. 8 – 9.

attained sustainable development through it, a detailed and thorough understanding of the history of that society is required in every possible sphere.

3. *Accountability*: It is a necessity for achieving good governance. It refers to any type of organization being accountable to whom they are working and responsible for. It can be enforced through rule of law and transparency in the working of any public or private organization.
4. *Transparency*: It refers to easy and direct accessibility of information for the ones who are likely to have an enquiry for a matter concern to them.
5. *Responsiveness*: It refers to the response given by the government to the needs of its stakeholders within a short period of time frame.
6. *Effectiveness and Efficiency*: The concept of effectiveness and efficiency in good governance refers to the efficient used of resources and producing the best possible output from the available resources in the meantime.
7. *Equity and Inclusiveness*: In order to have a good governance system, every opportunity made should be at the reached of everyone so that everyone feels being included and a part of it.
8. *Rule of law*: It refers to impartial enforcement of a fair legal framework by the competent authority.

The Second Administrative Reforms Commission have highlighted the need of making use of Information Technology (IT) in the functioning of the government thereby promoting e – governance. The reports in which the use of IT have been emphasized are as given below:

1. The First Report of the Commission entitled "Right to Information: Master key to Good Governance" recommended the setting of a unified portal through which all government information could be accessed. Meanwhile, the incapability of everyone especially in the rural areas were taken into consideration and thus further recommended the establishment and building up of a robust e – governance infrastructure for the people.
2. The Second Report *i.e.," Unlocking* Human Capital: Entitlements and Governance – A Case Study" emphasized the use of IT for the implementation of National Rural Employment Guarantee Act (NREGA), 2005. The recommendation of this report was to collect and stored all information in electronic form at the block level. The data are then shifted to the central repository at each state. The establishment of Geographic Information System (GIS) was recommended for Rural Employment Guarantee Scheme (REGS) so that information collected from various levels could easily be presented through this system. It recommended the use of SMART Cardsin carrying out pilot projects in cluster of villages. The card will be use for collecting personal information and recording of transactions through NREGA.
3. The fourth report of the commission "Ethics in Governance" recommended the re-engineering of the government system through the use of Information Technology (IT). The report suggested a thorough re – engineering of the present government working and then recommended the setting up of plans for the improvement of governance through the use of Information Technology (IT). In order to successfully use the system, a knowledge on the use of computers is required on the part of the officers and the National Information Commission (NIC) needed a training on the activities of every department to have a clear understanding on them. It further recommended the setting up of complaint tracking system and database for storing the personal details of persons convicted with the practise of corruption. The database should be fed with updated information by the concerned authorities.

Objectives of e – governance:

According to Pani and Mishra the major objectives of e – governance are as follows:[8]

8. Pani, N., Mishra, S. (2009). *E – Governance*. Mumbai: Himalaya Publishing House. 48.

1. To enhance the information flow.
2. To improve the interaction with the government.
3. To encourage people's participation in development.
4. To make the governing process more transparent.
5. To make the government accountable to its deeds.
6. To minimize the governmental expenditure.
7. To make the government more responsive with quicker reaction.

Stages of e – governance:

In India, the evolution of e – governance has undergone the following stages:[9]

1. Computerisation: The use of computer *i.e.*, computerisation is mainly engaged to the work of word processing and data processing.
2. Networking: It refers to a large connectivity network through sharing of information takes place between different government entities
3. On – line presence: It refers to keeping and maintenance of government websites up – to – date so as to served the needs of the user.
4. On – line interactivity: It refers to the use of easy government and citizen online interface through the use of IT and reduce the time and cost involve in physical interactions.

Types of Interactions of e – governance:

The types of interactions provided through e – governance are as follows:[10]

1. Government to Government (G2G): This type of interaction can be both horizontal and vertical *i.e.*, the former refers to different government functional entities and the latter refers interaction between nations, provinces and local governments. The aim of this interaction is not only restructuring of the government but also providing information efficiently and thus increased the flow of information.
2. Government to Citizen (G2C): It aims at making the functioning of the government citizen – friendly. It involves the interaction between the government and the citizen so as to make conveniences to the citizen when it comes to work with the government. It helps the government to work efficiently on their part and provide the best possible services to the citizens as and when required, thereby improving the quality of the work.
3. Government to Business (G2B): It refers to the interaction between the government and the business community in order to make the business deals, communication and different kinds of business transactions easy and convenient for the business firms.
4. Government to Employees (G2E): It refers to the interaction between the government and employees within it. It helps in increasing the speed and smooth interaction between the employees and thus increase the satisfaction level.

Role of e – governance in Administration:

[11]In order to explain the role of e – governance in administration, Gartner proposed a four-stage model of e-governance. In the first stage of "**Presence**", governments will go to the Internet and establish a least presence online. In the second stage of "**Interaction**", online presence will be reorganised and enhanced to include a searchable database of services and government staff will begin to interact with communication tools such as E-mail. In the third stage of "**Transaction**", governments will provide services online. At this stage, inhabitants will be able to benefit government services and governments can use E-authentication and payment services for providing services. The Fourth stage of Gartner's model is called "**Transformation**" in which governments will begin to assimilate services across various levels and functions to provide integrated services from various departments. Gartner believes that pace layers can be used to develop a business application strategy that delivers a better and faster response.

9. Second Administrative Reforms Commission: Eleventh Report. (2008).Promoting e – governance: The smart way forward.Retrieved from https://promoting_egov11.pdf (darpg.gov.in) Retrieved on 08/12/2022.

10. Hothi, B.S. (2019).*E – Governance*. Jaipur: RBSA Publishers. 23 – 24.

11. Retrieved from – https:// (civilserviceindia.com). E-Governance, E Governance Concept, E Governance In India

National e – Governance Projects:

The National e – Governance Plan (NeGP) which was formulated by the Department of Electronics and Information Technology (DEITY) was approved by the Union Government on 18th May 2006. The major features of the national projects include – common support infrastructure, governance, public – private partnership, integrative elements for conducting business, programme approach at the national and state levels, facilitator of DEITY, ownership of ministries, centralized initiatives and decentralized implementation. The National e – governance Plan consists of 31 Mission Mode Projects, among which a total of 11 were Central Mission Mode Projects, 7 were confined for State Mission Mode Projects and the rest thirteen (13) plans were an Integrated Mission Mode Projects i.e., they are carried out by both the central and the state government. The Central Mission Mode Projects are – MCA 21 (which was incorporated by Ministry of Corporate Affairs to introduced a service – oriented system of government for delivery of Government services); Pensions (it was developed in order to make easy transactions which are related to pension or retirement related activity and the nodal Ministry for it is Department of Pensions and Pensioners Welfare); Income Tax (developed by the Income tax Department in order to provide a comprehensive service for transaction of different kinds of business related to the Department); Passport and Visa (the concerned authority is Ministry of External Affairs); IVERT (Immigration); Central Excise and Customs (Automation of Central Excise and Service Tax was developed under this MMP in order to control the conduct of business in trade and Industry); Banking MMP; Unique Identification Number (UID) MMP; e – office MMP, insurance MMP; Posts MMP.

The Integrated Mission Mode Projects include – Common Service Centre (CSC), E – Courts, Electronic Data Interchange (EDI) for E – Trade, India Portal MMP, National E – Governance Service Delivery Gateway (NSDG) MMP, E – Procurement MMP and E – Biz MMP (the vision of this MMP was to transform business environment in the country by providing efficient, convenient, transparent and integrated electronic services to investors, industries and business throughout the business life cycle).[12]

The State Mission Mode Projects (MMPs) under the NeGP included the following – land records, road transport, agriculture, Police, Treasuries, Municipality, E – District, Commercial Taxes, E – Panchayat, Employment Exchange, Education, Health and E – Public Distribution System (PDS). Besides these MMPs, the state government can also take initiatives through the competent authorities and carried out e - governance projects, which may vary according to the needs of the state.

The challenges for development of e – governance when investigated from various spheres i.e., political, social, economic and technological came to the conclusion that the weaknesses included lack of cyber law, public acceptance of the system, poor internet connectivity, financial issue, shortage of persons with IT skills, software licenses and communication issue due to multi – linguistic nature. The major threats for this challenge included corruption, piracy, digital divide, lack of transparency, privacy and political instability.

Conclusion:

When considering the present and the future needs of the country, it is a good deed that the Second Administrative Reforms Commission has come up with the report of promoting e – governance for reforming the administrative machinery of the government. Although it had come up with many reforms strategy, the system of e – governance will always remain among the greatest help to the government and to the people as well. Even though we are in the initial stages of implementing the e – governance and building up of the IT infrastructure for it, we have experienced its uses in our everyday life. The used of Information Technology in the interaction between the Government and its users have gained importance and familiarity through the pandemic we have been experienced recently. It will serve to be a good administrative reforms tool in the future as well.

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EFFICIENCY AND E-GOVERNANCE IN THE ADMINISTRATIVE SYSTEM

Ningthoujam Irina Devi[1]
S.Lalthanzuali[2]

Abstract

The term "efficiency" connotes different meanings in different contexts. Efficiency is a prerequisite to facilitate good governance. In the context of public administration, efficiency is required at all levels to distribute the services to the people without any condition. The term has been in used in public administration to denote the delivery of services to the citizens with the least possible costs and yield the best possible outcome. Increasing of efficiency in the public administrative sector is the key to the promotion of sustainable growth and development. This article attempts to highlight how the concept of 'efficiency' has been brought into reality through electronic governance in the administrative system.

Keywords

Efficiency, Public Administration, Electronic Governance.

Introduction

The term electronic governance popularly known as e – governance refers to the use of Information and Communication Technology (ICT) , particularly the internet in the functioning of the government in order to bring about an efficient and effective administrative system. The idea of using ICT has come into existence with the hope of improving the administrative functioning of the government, thereby increasing the efficiency in the delivery of the services.

The term 'efficiency' has been in use from the late 19th century. According to Rutgers and Van der Meer (2010), the term efficiency has originated from Aristotle's '*theory of causation*' whose aim was to build knowledge based on human experiences about the

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physical nature. The theory was led by multiple causes like – material, formal, final and efficient, where in, the term 'efficient' refers to the motion or action which brought about the effect. His concept of efficiency is linked to the outcome but the actual effect of efficient may not necessarily determine the achievement of the final cause.

The term efficiency refers to the ability to obtain the most out of a given input while using the time, effort, money, energy, and raw materials in the least possible way. It is also described as the capacity to get the desired results through the help of a systematic and well – planned task.

Concept of Efficiency in Public Administration

According to Grandy (2009), New Public Management is the latest tool demanded in the public sector in order to promote efficiency. He highlighted the broad view of efficiency proposed by Morris Cooke and Frederick Cleveland i.e., efficiency is a means of promoting public responsiveness to citizens demand in a democracy. According to him, the concept of Pareto leaves their goals, underlying values, unspecified, explicitly allowing for multiple goals and values. The efficiency could be attained only if any of the goals can no longer be advanced without impairing at least one of the others which made it value – neutral or meta – value.

Rutgers and Meer (2010) stated that the term efficiency traces its origin to Aristotle's theory of Causality. The authors are of the opinion that 'efficiency' is understood as 'technical efficiency' in the contemporary world. According to the authors, Aristotle's concept of efficiency stems from his influential work on the nature of knowledge which made it a part of the philosophy of science and the scientific explanation accounts for the four aspects of causation i.e., formal cause, material cause, efficient cause and the final cause. Aristotelian or substantive meaning in which efficiency is referred to as the ability to get things done, i.e., as an active force, power, or ability; the operative agent. This substantive sense of efficiency as a force is still preserved in expressions such as "an efficient administrator" and "an efficient organization." This meaning of efficiency is primarily applicable to the quality and character of individuals and groups of individuals. Efficiency is intrinsically linked to final goals, but not necessarily assessed in terms of their attainment, that is, not as a relation between resources and results but rather the capacity to produce an effect. The economic or technical meaning views efficiency as the best or optimum use of resources and as the ratio between input and output.

Manzoor (2014) describes efficiency as an imperative which must be achieved at all levels. He is of the opinion that the concept of efficiency has two basic divisions i.e., increased in the output alone which was later accompanied by addition of value to it. According to Schachter ( ), two school of thought on efficiency had emerged in the context of public administration i.e., the first is based on the Weberian model of 'ideal type of bureaucracy' where the structure of public organisation is provided by bureaucracy. Secondly, public organisation is seen as a means to attain multiple value – based goals and may provide the basis for public organisations which might be lacking efficiency. Popa Florina (2017) opined that efficiency which is an important component of development could be more relevant in private sector rather than the public sector which provides services to the citizens. The forms of efficiency highlighted in the study are productive efficiency, technical efficiency and allocative efficiency. Productive Efficiency refers to producing of goods and services at the least possible cost. Technical efficiency is concerned with the use of certain tools/methods in order to get an output. Allocative Efficiency means cost and benefit ratio which comes with an optimal distribution of goods and services as per the consumer preferences.

The concept of efficiency went through transition since the beginning of public administration as an academic discipline. It begins with Woodrow Wilson's essay, "The study of Administration" (1887) which advocated the separation of politics and administration popularly known as politics – administration dichotomy for the promotion of efficiency in public administration. He is of the opinion that politics is concerned with policy making while public administration is concerned with implementation of the policies. Therefore, he argued that administration cannot be separated from politics due to its political nature and political role. In order to promote the efficiency of an organisation, F.W.Taylor (1911) introduced the concept of scientific management which advocated the application of scientific techniques to management and production in the organisation. It was concerned with studying the relationship between the physical nature of work and the physiological nature of workmen. Taylor stressed upon specialisation, predictability, technical competence and rationality for improving the organisational efficiency and economy. Reinhard Bendix (2001) opined that "By maximising the productive efficiency of each worker, scientific management would also maximise the earnings of workers and employers. All conflict between capital and labour would be resolved by the findings of science."

The major proponents of the classical theories which were developed during the first half of the twentieth century believed in the achievement of organisational efficiency

through the adoption of well – planned fundamental principles of administration. They believed in the universality of principles irrespective of the nature and context of work. According to Max Weber, efficiency could be attained through the adoption of bureaucratic form of administrative organisation. He propounded the concept of 'Ideal type' of bureaucracy which could be understood with the help of his typology of authority system. He divided authority into three types – traditional authority (where authority is determined by custom and precedent), charismatic authority (where authority is determined by the characteristic and qualities of an individual) and legal – rational authority (where authority rests on the legality patterns of rules which are rational in character). The classical theories were criticised for laying too much emphasis on the mechanistic view in the hope of achieving efficiency in the organisation which is not complete without consideration of the socio – psychological aspects of the worker. Another classical theorist, Luther Gullick felt that the ideal form of government is sure to have the system of management for efficiency and democratic values by identifying the four fundamental features of departmental organisation i.e., Purpose, Process, Person and Place. He is of the opinion that efficiency should serve the primary purpose in an organisation. Herbert Simon is of the opinion that efficiency is the "basic criterion" in an organisation which is essential for managing and production in an organisation.

During the 1930s, the Human Relations School came into existence. It laid emphasis on the studies of workers behaviour and output capacity by taking into account his physical and mental well – being. They considered that in order to run the administrative system efficiently the above-mentioned factor must be taken into account as it is the means through which the ends could be completely achieved. Elton Mayo conducted the research program at Harvard business school which shook the foundations of the classical school theories. The studies were conducted in four phases – Illumination Experiment (conducted in order to determine the effect of illumination on the productivity of the worker) , Relay Assembly Test Room Experiment (conducted to observed the effect of changes in the working conditions on the workers output), Mass Interviewing Programme (conducted to vent out the workers sentiments through interview with no condition) and Bank Wiring Experiment (conducted to understand how the norms created by the worker's social group had controlled the output of the workers).

Dwight Waldo (1948) questioned the concept of efficiency being referred to as the core value in public administration. Instead, he pointed out that it should be measured in terms of other values like ratios and proportions as he is of the opinion that efficiency

operates in the interstices of value system and prescribes a relation i.e., ratios and proportions and in return, it receives the moral content. He is of the opinion that things cannot be simply regarded as 'efficient' or 'inefficient' as everything is efficient or inefficient in its own way depending upon the context with which we are referring to. Herbert Simon (1976) in his "Administrative Behaviour" stated that efficiency is the basic criterion of administrative choice. He pointed out that 'efficiency' should always be measured in the light of the desired goals in order to find the right criteria. He considered efficiency as neutral value when related to the outcome/output.

Efforts to promote efficiency through e – governance

The means to achieve efficiency in administration has now undergone different transitional stages. The Government has made used of the Information Technology Revolution in order to bring about efficiency in providing services to the citizens. In 1987, the National Informatics Centre Network (NICNET) was launched which led to the emergence of electronic – governance (e – governance). It involved the application of Information and Communication Technology (ICT) in the administrative system of the Government in order to bring a Simple, Morale, Accountable, Responsive and Transparent (SMART) governance. E – governance has provided services to different stakeholders which made it very efficient in providing services and is a matter of convenience for the users.

The types of interactions it embarked on are – Government to citizen (G2C), Citizen to Government (C2G), Government to Government (G2G) and Government to Business (G2B). G2C is the service provided by the government to the citizen like tax payment, online application for certificates, renewing of licenses, etc through online which could be easily done from anywhere if internet services are available. C2G provides the opportunity enjoyed and exercised by the citizen to the government through e – democracy and e – obtaining feedback from the people to the government. The G2G involved sharing and exchange of information strictly between and within the governmental spheres only. The G2B enabled interaction between the government and business sector in order to bring an end to red–tapism and bring transparency in selling surplus items, procurement of the required goods and services and thus saving a lot of time. The e – governance services are carried out at both central and state levels and are maintained by the Ministry of Electronics and Information Technology at the central level.

The National e-Governance Plan (NeGP) was approved by the Government on 18th May, 2006. It comprised of 27 Mission Mode Projects and 8 components and 4

projects - Health, Education, PDS and Posts were introduced in 2011 taking the total to 31 Mission Mode Projects (MMPs). It is further divided into Central Mission Mode Projects, State Mission Mode Projects and Integrated Mission Mode Projects. The Central Mission Mode Projects include – Banking, Central Excise and Custom, Income Tax, Insurance, MCA21, Passport, Pension, Post, UID, E – office, Immigration, Visa and Foreigners Registration & Tracking. The State Mission Mode Projects includes – Agriculture, Commercial Taxes, e – district, Employment exchange, Land Records (NLRMP), Municipalities, e – Panchayat, Police (CCTNS), Road transport, Treasuries Computerisation, Public Distribution System (PDS), Education and Health. The Integrated Mission Mode projects include – Common Service Center (CSC), e – biz, e – courts, e – procurement, India Portal, Electronic Data Interchange (EDI) for e – trade. The National e – Governance Plan 2.0 (e – Kranti) initiated in March, 2015 had further raised the number of the Mission Mode Projects from 31 to 44 by including new projects such as Women and Child Development (WCD), Social Benefits, Financial Inclusion, e – Bhasha, urban governance, etc.

The Government has undertaken various policy initiatives and projects in order to develop core and support infrastructure. State Data Centres (SDCs), State Wide Area Networks (S.W.A.N), Common Services Centres (CSCs) and middleware gateways i.e National e-Governance Service Delivery Gateway (NSDG), State e-Governance Service Delivery Gateway (SSDG), and Mobile e-Governance Service Delivery Gateway (MSDG) constitute the major core components. E-Pramaan and G-I cloud is the new initiative which facilitates the usage of cloud computing by e-Governance projects, thus enhancing their efficiency.

Conclusion

From the above study of different strands of thought and a rich corpus of literature on efficiency, it can be concluded that efficiency refers to the means of receiving the maximum output with the least possible input. Although efficiency serves to be one of the most important concepts in public administration, it could not be fully attained due to its focus on public orientation where profit maximization cannot be the sole aim. Otherwise, the government is striving and is attaining efficiency to its greatest extent by adopting e – governance which has covered different areas through its projects and which made the governance and particularly service delivery more effective, accountable and transparent.

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Declaration

The authors declared that this article is an original work, not published in any Journal nor has been sent to any other source for publication.

DEPARTMENT OF PUBLIC ADMINISTRATION
MIZORAM UNIVERSITY
(A Central University)

TWO DAY INTERNATIONAL SEMINAR
On
RECENT TRENDS IN PUBLIC ADMINISTRATION: G20 PERSPECTIVES

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This is to certify that **Mr. S. Lalthanzuali** presented a paper titled '**E-Governance as an Innovative Mode of Public Service Delivery**' in the Two Day International Seminar on *'Recent Trends in Public Administration: G20 Perspectives'* organized by the Department of Public Administration, Mizoram University on 23rd and 24th May, 2023.

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Prof./Dr./Mr./Ms. S. Lalthanzuali

has presented a paper titled

Promotion of Digitalisation in Administrative Process through E-Governance in Mizoram : An Overview

in the Two – Day National Seminar on "Improving Governance and Administration in North East India: Challenges and Opportunities in the Context of the G20" organised by the Department of Public Administration, Pachhunga University College, Aizawl held on 27th – 28th April 2023 at Pachhunga University College, Aizawl, Mizoram.

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MIZORAM UNIVERSITY

AIZAWL

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Department *: Public Administration*
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Roll No. *: PA/Ph. D-CW/20/12*
Regn. No. *: 3008 of 2014*
Year of Exam *: February, 2021*

Date of Result Declaration: 25th March, 2021

Course Code	Course Title	Credit	Grade	Grade Point	Credit Point
C-501	Research Methodology	4	A+	8	32
C-502	Concepts & Theories in Public Administration	4	A+	8	32
C-503	Area Specialization	4	A	7	28
C-501(A)	Research and Publication Ethics	2	A	7	14

Total Credit Points Earned : 106 **Total Credit : 14** **SGPA : 7.57** **Result : PASSED**

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DEPARTMENT	: Public Administration
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DATE OF ADMISSION	: 28/10/2020
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Ph.D. REGISTRATION NO.& DATE	: MZU/Ph.D./1623 of 28.10.2020
EXTENSION (If any)	: NIL

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ABSTRACT

ELECTRONIC GOVERNANCE AND SERVICE DELIVERY: A CASE STUDY OF AIZAWL DISTRICT, MIZORAM

AN ABSTRACT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

S.LALTHANZUALI

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DEPARTMENT OF PUBLIC ADMINISTRATION

SCHOOL OF SOCIAL SCIENCES

JUNE, 2025

ELECTRONIC GOVERNANCE AND SERVICE DELIVERY: A CASE STUDY OF AIZAWL DISTRICT, MIZORAM

By

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Department of Public Administration

Supervisor

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Submitted

In partial fulfillment of the requirement of the Degree of Doctor of Philosophy in Public Administration of Mizoram University, Aizawl.

CHAPTER I
INTRODUCTION

The first Chapter brings an Introduction to the thesis. This Chapter brings a highlight of the relationship between Information Technology (IT) and Governance. It tells us that the governance process has been enhanced through the incorporation of the IT tools in the daily functioning of the Government. It also brings into light the relationship between governance and good governance as the aim of good governance is to maximized governance and minimization of the Government. The term E – Governance and Electronic Government has often been used interchangeably and this chapter brought a differentiation of the terms. The IT Revolution and evolution of e – governance in India has also been highlighted in this Chapter. The types of e – governance, objectives and models has been highlighted in this Chapter. The IT Act, 2000 has also been elaborated as it is the basis of the e – governance proceedings. A brief introduction on the evolution of Mizoram State E – Governance Society (MSeGS) has also been highlighted. E – Readiness which is a need for the growth and successful implementation of e – governance has also been expressed in this Chapter.

Statement of the problem

The system of digitalising the office management is among the first step of using IT in the office management. Although the system had been introduced with the hope of providing conveniences for the people, we do not know whether there are times where it could in turns create a problem for the user due to poor internet connectivity, power supply failure, inadequate infrastructure for accessing the internet, lack of awareness on the use of the system. Therefore, the study had made an attempt to highlight how the use of e-governance system has improved the Government functioning in service delivery i.e., through digitalisation of offices.

Also, the electronic payment (e-payment) system had been introduced by both the Department (i.e., Public Health Engineering and Power & Electricity), Government of Mizoram in 2017 and 2018 respectively. It was introduced in order to provide a matter of convenience for the people in paying their bills. The payment can be made through the “Payment Gateway” & “Internet banking” hosted by each of the Department’s

designated Banks. The fees could also be paid through the use of BHIM, Google Pay, Paytm, Phonpe or through the use of the Department online portals. Due to it being a recent initiative, there is likely a chance that it could have face problems and drawbacks in performing their activities. Hence, the research work also studied how the used of IT in the e-payment system has benefitted the people in reality and also the problems faced by them.

The e – governance system has been deployed to provide services to the citizen by the government in order to bring about efficient, transparent, accountable and cost – effective services. The progress and growth of the e-governance is likely to depend on the awareness and use of the services by the people as well. Therefore, the study made an attempt to evaluate the awareness of the citizens in the e-governance system.

Review of Literature

A total of 22 books and 21 articles which were related to the topic had been reviewed in order to identify the research gaps and the need for doing research on this title.

Scope of the Study

The present research work focused on the electronic governance and the service delivery mechanism in Mizoram with special reference to Aizawl city. The study highlighted the historical background of Electronic Governance and its various projects in Mizoram. The study was conducted to see how far the digitalisation of offices under the Government of Mizoram has improved the administrative capability and enhance better governance. The other aspects of the study were to study how the e-payment system has emerged and its purposes and the use of it through the Public Health Engineering (PHE) and Power & Electricity (P&E) Departments. The study also evaluated the awareness of the citizens in the e-governance process. Also, the study highlighted the problems and challenges that are faced by both the parties i.e., Government and citizens in the implementation and the use of it.

Objectives of the Study

1. To study the historical background of electronic governance and its various projects in Mizoram.

2. To evaluate how the digitalisation of office management has improved the administrative capability in selected departments under Government of Mizoram.
3. To evaluate the use of electronic payment system undertaken by Public Health Engineering Department and Power & Electricity Department, Government of Mizoram.
4. To evaluate the citizens awareness in the electronic governance process.
5. To study the problems and challenges face by the Government in the implementation of the electronic governance in the administrative functioning and the delivery of services to the citizens.

Research Questions

1. What is the historical background of electronic governance and the various projects in Mizoram?
2. How does the digitalisation of the office management enhance the administrative capability in selected Government offices?
3. How do the people in Aizawl city make use of the electronic payment system?
4. How do citizens become aware of the e-governance process?
5. What are the problems and challenges face by the Government in the implementation of the electronic governance system for delivery of public services?

Methodology

The present research work is a study on the electronic governance and its service delivery mechanism in three aspects i.e., how the digitalisation of office management has enhanced the administrative capability, the used of the electronic payment system for water and electricity bill payment and the evaluation of citizens awareness in the e-governance system. The present research work is descriptive in nature. It uses the mixed method (i.e., both the qualitative and quantitative methods) for collection and analysis of the data. It uses both the primary and secondary sources of data.

For the purpose of studying how the digitalisation of the office management has enhanced the administrative capability, convenience (non-probability) sampling

method was used to draw samples from the selected 43 government department in Aizawl. These Departments were selected on the basis of Portfolios assigned to the Ministers under Government of Mizoram. A set of questionnaire had been prepared and administered to the officials. In order to evaluate the citizens awareness in e-governance and to study the uses of e-payment method by the people for electricity and water bill payment, the samples was drawn from Aizawl through multi - stage random (probability) sampling method. For the purpose of studying these two areas, a total of 550 respondents each was randomly selected from residents of Aizawl district. Two sets of mixed questionnaire was made for the citizens separately. The data collected through the questionnaire was divided into two sections for the purpose of analysis – demographic profile of the respondents and the responses of the participants with the real context of study. Semi- structured interview method was also administered to the Government officials. The primary data was also collected through the official Government documents, reports and statistical handbooks. For analysing the data, descriptive statistics like frequency and percentage was used.

The secondary data was collected from books, research articles, published theses, academic journals, newspaper, etc. Electronic medium like Internet sources was also used as an important means for collection of data.

Chapterisation

CHAPTER I : Introduction

CHAPTER II : Historical background of Electronic Governance and its various projects in Mizoram

CHAPTER III : Digitalisation of Government offices in Aizawl

CHAPTER IV : Uses of e-payment system in Aizawl

CHAPTER V : Citizens awareness in electronic governance

CHAPTER VI : Conclusion

CHAPTER II

HISTORICAL BACKGROUND OF ELECTRONIC GOVERNANCE AND ITS VARIOUS PROJECTS IN MIZORAM

The procedures of governance around the world, particularly in India, have been profoundly altered by technological advancements. Efficiency, transparency, and public engagement have all been improved, costs have been cut, and decision-making has been optimized as a result. Automating operations, managing data, implementing open data initiatives, and keeping digital records have all contributed to the simplification of administrative work. Online access to government services is increasingly available to citizens, and e-Governance platforms make it possible for governments to improve their responsiveness. Through the use of analytics and predictive modeling, data-driven decision-making is made possible, which in turn enables governments to make decisions that are informed. Through the implementation of digital inclusion, government services have become more accessible to a wider audience, including those who live in underserved or distant locations. Through the implementation of digital processes and automation, it has been possible to accomplish both cost reduction and resource optimization. Sensitive government data is protected by advanced cybersecurity safeguards, which also assure compliance with rules. Improved policy implementation and governance are both made possible by the use of digital platforms for governance. Nevertheless, there are obstacles that need to be addressed, such as resistance to change and the information technology gap. Technology has the potential to further revolutionize governance, making it more responsive and effective in its capacity to serve the public. This transformation can be achieved through continual innovation and deliberate implementation.

The state government keeping these challenges and way forward has implemented several e – governance projects in order to improve the development of IT skills and knowledge has also conducted training programmes through DICT every once in a while. Not only that, it has adopted various projects to enhanced easy delivery of services to the people and promotes inclusivity. So, in this regard, an attempt was made

to understand about the development of e – governance in Mizoram and how ICT is serving as a growth stimulator for the state.

CHAPTER III

DIGITALISATION OF GOVERNMENT OFFICES IN AIZAWL

The third chapter is on the "Digitalisation of Government offices (Paperless) in Aizawl." The Chapter focuses on studying various Government Departments in Aizawl by conducting a self – administered questionnaire to the workers in the offices. The Chapter is about finding how the Government offices were carrying out their daily works, is the paperless mode of working adopted, if it is not being implemented, what is the reason behind it. Also, the advantages and disadvantages of using the system have been highlighted by the workers who have partially use the system and suggestions have been made by the workers as to how the usage could be increase in the future.

This study employed a quantitative research design to investigate how the digitalisation of office management has improved the administrative capability in selected departments under Government of Mizoram. In order to study digitalisation of Government offices in Aizawl, 43 Government Departments were selected. These Departments had been selected as per the Department being allotted to the Councils of Ministers under Government of Mizoram. From the Sample, a convenience sampling method was used to select respondents. A total of 210 respondents completed the questionnaire. The respondents included employees from various Classes of workers i.e., Group A, B, C & D employees.

The questionnaire was structured into two main sections:

1. **Respondent Profile**: This section collected basic demographic information about the respondents, including gender, age, occupation, and educational qualifications.

2. **Questionnaire**: This section was divided into multiple subsections addressing various aspects of digitalisation of office works, including: Awareness and Adoption of Digitalisation, Preferred Work Systems and Communication

Modes, Impact on Government Operations, Readiness and Barriers to Implementation, Challenges and Limitations

3. The collected data were analyzed using descriptive statistics, frequency analysis and percentages. Frequency analysis was conducted to determine the distribution of responses for different categories.

Findings of the Analysis

1. Awareness of the Concept of "Digitalisation of Offices" or "Paperless Office"

- The awareness of **digitalisation** or **paperless offices** (97.6%) reflects a high level of knowledge about modern technological advancements in office settings. This finding indicates that, at least on a conceptual level, the idea of shifting to digital or paperless systems has reached almost every participant. The remaining respondents (1.4%) who are unaware of the concept might represent a small group that is either not directly engaged in office technology systems or who have had limited exposure to discussions about digital transformation.

- The 1% of respondents who chose not to disclose their awareness could indicate either uncertainty or unwillingness to engage, which may reflect a larger sentiment of resistance or disengagement from the conversation around technological changes in offices.

2. Mode of Office Work

- A significant portion (63.3%) of respondents still rely primarily on **traditional paperwork**, suggesting that despite the high level of awareness about digitalisation, there is a substantial gap in its adoption. Many offices may still be entrenched in paper-based systems due to organizational inertia, infrastructure challenges, or simply the comfort and familiarity of using paper.

- About one – third of the respondents (36.6%) use a **combination of paper and computer systems**, pointing to a hybrid model of working that suggests some

degree of transition. This highlights that while paper is still dominant, many offices are beginning to implement digital systems alongside traditional methods, possibly as a compromise solution.

3. Start of Digitalisation or Paperless System

- The survey indicates that while 41% of offices have begun to implement a digitalised system, a large proportion (30%) still have not. This disparity suggests that even though there may be awareness of the benefits of digitalisation, many organizations face barriers to full implementation. These barriers could include financial constraints, lack of skilled personnel, or inadequate technical infrastructure.

- The 29% who preferred not to disclose their implementation status could be indicative of uncertainty within organizations, where there may be discussions about digital transformation but no concrete actions yet. Alternatively, it could reflect a hesitancy to reveal that progress has been slow.

4. Reasons for Non – Implementation

- The reasons for not implementing a computerised or paperless system vary, but the most common issue (21.9%) is **delayed or non-implementation**. This could stem from a lack of leadership initiative or perhaps prioritization of other projects. Additionally, 19% of respondents cited **departmental priority issues**, suggesting that digitalisation may not be seen as an immediate necessity by management, especially if traditional methods are still perceived as functional.

- The mention of **poor facilities** by 10.5% of respondents further highlights the logistical challenges that could hinder implementation. This could refer to outdated computer systems, a lack of internet connectivity, or insufficient workspaces to support digital work.

- **Lack of computer skills** (3.3%) is a less frequently cited issue but remains a critical factor. If employees do not possess the necessary skills to operate computers efficiently, the adoption of computerised systems would be slow or ineffective. This presents a clear need for training and capacity-building initiatives.

- The large portion (45.2%) that chose not to disclose the reason might reflect a combination of sensitive internal factors, ranging from poor leadership to a reluctance to acknowledge organizational failures.

5. Plans for the Use of Digitalisation in Office Work

- The nearly unanimous response (99%) that there is a **plan for digitalisation** suggests that, while implementation may be slow, most organizations recognize its importance. The existence of a plan indicates that office digitalisation is not a question of **if**, but **when** and **how** it will be implemented.

- However, the fact that a plan exists does not guarantee smooth implementation. Issues such as infrastructure, skills, and organizational priorities can still hinder progress despite the presence of formal plans.

6. Internet Connectivity in the Office

- Almost all respondents (99%) reported having **internet connectivity**, which is a positive sign for digital transformation. Internet access is foundational for implementing digitalised systems, as it enables access to cloud storage, digital communication tools, and real-time collaboration platforms.

- The 1% without internet access represents a barrier that needs to be addressed. In today's digital world, a lack of internet access means slow implementation and exclusion from the broader advantages of digital transformation.

7. Working Knowledge of Computers

- The fact that 89.5% of respondents have a **working knowledge of computers** is encouraging for the future of office digitalisation. It implies that majority of the workforce is already equipped with the basic skills necessary to engage in digital office work.

- However, 9.5% of the respondents without working knowledge and the 1% who preferred not to comment signal that a segment of employees may need targeted training. This could involve tailored learning programs for older workers or those in roles traditionally less reliant on digital technology.

8. Required Computer Qualifications as Demanded by the Government

- A substantial 69% of respondents possess the **necessary qualifications** to meet the government's computerisation requirements, which suggests that a significant portion of the workforce has been formally trained to use office technology.

- However, the fact that 30.5% of the respondents do not possess the required qualifications is concerning. It signals that despite awareness and plans for implementation, a large number of employees are not yet fully prepared or certified to work in a fully digitalised office environment. This underscores the need for continued investment in upskilling and formal training programs.

9. Perceived Helpfulness of Digitalisation in Daily Government Work

- The overwhelming majority (94.3%) of respondents who believe that digitalisation would be **helpful in daily government work** is a strong indicator of positive sentiment towards digital transformation. This suggests that most respondents recognize the potential efficiency gains, improved workflow management, and time-saving aspects of adopting a digital system.

- The small percentage of dissenting opinions (1.4%) and those who did not respond (4.3%) likely represent groups that are either skeptical of the

technology's applicability to their specific roles or are reluctant to embrace change.

10. Capability of the Government of Mizoram to Use the System in Daily Functioning

- A notable 80% of respondents believe that the **Government of Mizoram is not yet capable** of fully using a digitalised system in its daily functioning. This discrepancy between the widespread belief in the helpfulness of digitalisation and the perceived lack of capability highlights a critical gap.

- This gap might be attributed to issues such as inadequate infrastructure, bureaucratic red tape, or insufficient leadership support. The sentiment could also reflect a lack of confidence in the government's ability to follow through with implementation, perhaps due to previous failures in similar initiatives.

11. Government Awareness to Fully Adopt Digitalised Systems

- There is a division in the opinions regarding whether the government has enough **awareness to fully adopt digitalised systems**. While 51.9% believe that the government lacks awareness, 39.5% think there is sufficient awareness.

- The 51.9% of the respondents that see a lack of awareness may be highlighting the importance of government leadership in not only recognizing the need for digitalisation but also actively promoting it through policies, training, and infrastructure investment. This may reflect a perception that the government, while aware of the concept, has not yet fully understood or embraced the steps needed for comprehensive adoption.

12. Reduction of Paper Consumption Through Digitalisation

- A majority of respondents (61.4%) believe that **digitalisation reduces paper consumption**, which is one of the primary goals of adopting a paperless

system. However, 29% of respondents disagree, indicating that, despite the introduction of computers, paper consumption remains high.

- This disconnect suggests that while digital tools may be in use, they may not be fully replacing traditional paper methods. Offices might be using both simultaneously or facing obstacles in completely phasing out paper due to legal or procedural requirements.

13. Will you be able to operate a Computer if insisted by authorities?

- A strong majority, **81.9%**, believe they would be able to operate a computer if required by authorities, reflecting a general level of confidence in computer literacy or at least a willingness to learn.

- **10.5%** responded that they would not be able to operate a computer, indicating that there is still a notable portion of the workforce that feels unprepared or lacks the necessary skills.

- **7.6%** preferred not to answer, which could indicate hesitation, uncertainty, or a lack of engagement with the idea of mandatory computer use.

14. Reasons for the Slow Progress of Computer Use in Government Offices

- **42.4%** of respondents cited **other reasons** for the slow progress of computer use, possibly reflecting a wide range of factors such as lack of leadership, inadequate policies, or department-specific challenges.

- **30%** pointed to a **lack of awareness**, suggesting that many employees may not fully understand the benefits or importance of digital transformation.

- **23.8%** identified **poor infrastructure** as a major barrier, likely referring to unreliable internet connections, outdated equipment, or insufficient technological resources.

- **3.8%** preferred not to state a reason, reflecting either disinterest or reluctance to criticize the system.

15. Is It Necessary to Implement Digitalisation in All Government Offices?

- An overwhelming **91.4%** of respondents believe it is necessary to implement digitalisation across all government offices, showing a strong consensus on the importance of modernizing government operations.
- Only **1.9%** felt it is not necessary, which suggests that resistance to computerisation is minimal.
- **6.7%** preferred not to say, potentially reflecting uncertainty about the scope or feasibility of full-scale implementation.

16. Who Is Necessary for Successful Implementation?

- **47.1%** of respondents believe **government officials** are the key to successful implementation, emphasizing the role of leadership and policy-makers in driving digital transformation.
- **17.1%** pointed to **workers** as essential, suggesting that the success of the system also depends on the workforce's willingness and ability to adopt new technologies.
- **23.8%** mentioned **other factors**, likely referring to a combination of both government officials and workers, as well as possibly IT support or third-party consultants.
- **11.9%** preferred not to answer, which could indicate a lack of knowledge or confidence in who should be responsible for implementation.

17. Preferred System of Work

- **66.7%** of respondents preferred a **paperless** system, indicating a clear preference for digital workflows once proper systems are in place.

- **21.9%** still preferred **paper**, which reflects either a resistance to change, comfort with traditional methods, or doubts about the efficiency of the paperless system.
- **11%** preferred **both** paper and digital systems, showing that some respondents see value in a hybrid approach, at least during the transition phase.
- **0.5%** found the question **not applicable**, suggesting they might not deal with workflows that would be affected by such changes.

The following chart shows the preference of the workers for doing daily works

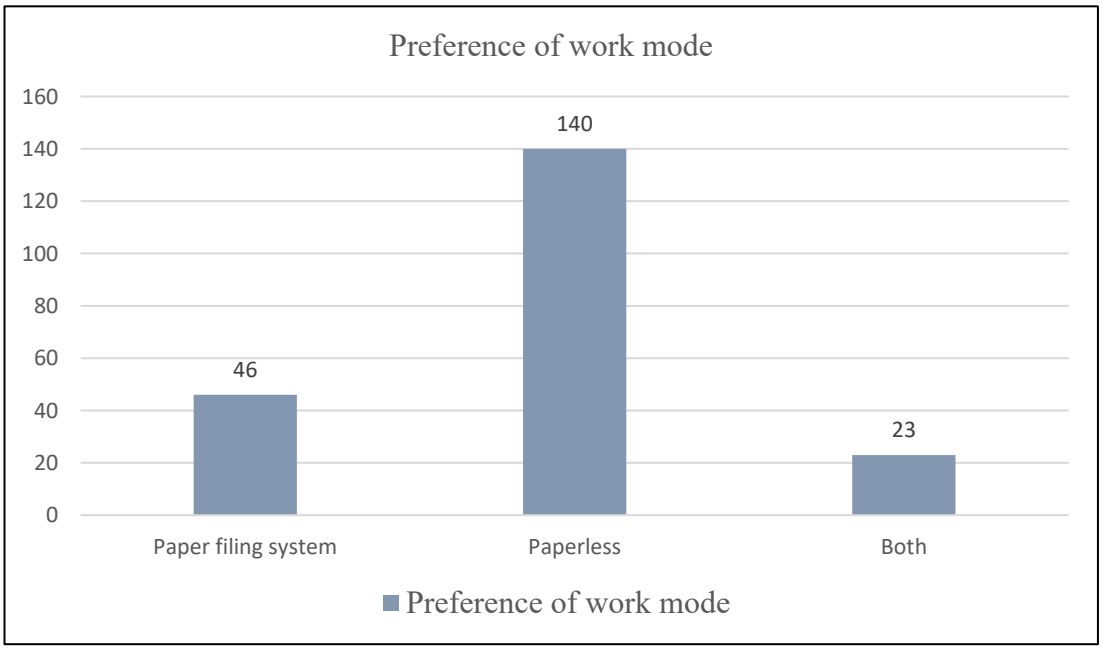


Figure 1: Column chart showing the preference of work by the respondents

18. How Do You Initiate Business with Other Departments?

- Responses were almost evenly split, with **49.5%** using **paper** to initiate business with other departments, while **48.6%** use **both paper and electronic** means, showing that most offices are still heavily reliant on paper.
- Only **1.9%** use **other** methods, which might include fully digital processes or other specialized systems.

- This near-even split suggests that while computerisation has made inroads, traditional paper-based communication is still widely used, especially in inter-departmental dealings.

19. Applications/Software Mostly Used for Office Work

- **47.1%** of respondents identified **MS Excel** as the most commonly used application, likely due to its versatility in handling data and spreadsheets.
- **25.2%** cited **MS Word**, indicating its importance for document creation and editing.
- **27.6%** pointed to **other** software, possibly including government-specific applications, custom programs, or alternative productivity tools, reflecting a diverse digital toolkit in government offices.

20. Estimated Time for Workers to Be Well-Versed in Digitalisation

- The majority, **50.5%**, felt that workers would **most probably never** become fully versed in digitalisation, indicating a significant lack of confidence in the training and resources currently available.
- **38.1%** were uncertain, choosing "**cannot say**," which reflects the general uncertainty about the effectiveness of training programs and the speed of implementation.
- **11.4%** believed that workers would become competent depending on **training**, showing a minority that sees proper training as the key to full proficiency.

21. Measures to Popularise System Use

- **50.5%** of respondents suggested **mass awareness** campaigns to popularise system use, highlighting the need to raise understanding and acceptance of digitalisation across all levels of government.

- **31.4%** recommended **providing adequate facilities**, reflecting the need for better infrastructure, such as hardware, software, and internet connectivity, to make the digital transition smoother.
- **18.1%** mentioned **other** measures, which could include incentives, policy changes, or IT support services to encourage broader use of the system.

22. Does Digitalisation Bring Transparency in Department Work?

- **80%** of respondents believe that digitalisation increases **transparency** in department work, suggesting strong support for the idea that digital systems help reduce corruption, make processes more open, and improve accountability.
- **13.8%** said it brings transparency **up to some extent**, indicating that while digitalisation helps, it may not fully resolve transparency issues without other structural reforms.
- **3.8%** did not believe digitalisation brings transparency, possibly due to concerns about data manipulation or poor implementation.
- **2.4%** preferred not to say.

23. Does It Make the Government More Accountable to People?

- **73.3%** of respondents said digitalisation makes the government **more or less** accountable to people, suggesting that most see at least some level of increased accountability due to digital records, tracking, and open access.
- **23.3%** answered **yes**, reflecting those who strongly believe that digitalisation directly improves government accountability.
- **2.4%** did not believe it leads to greater accountability, and **1%** found it **not applicable** to their work.

24. Does Digitalisation Improve Website Maintenance?

- **84.8%** of respondents believe that digitalisation improves **website maintenance**, showing that digital systems can help streamline and automate tasks related to updating and managing online platforms.
- **9%** felt it improves it **more or less**, meaning they see some benefits but might not find them substantial.
- **3.3%** said it does **not improve** website maintenance, possibly pointing to poor implementation, outdated systems, or lack of skilled personnel.
- **2.9%** preferred not to answer.

25. Does It Increase Website Visitors?

- **47.6%** believe digitalisation increases **website visitors**, showing that digital systems improve access to information and services for the public.
- **43.8%** preferred not to say, which may suggest that many respondents are unsure or do not track website metrics directly.
- **8.6%** felt it does not increase visitors, possibly due to poor public awareness of online services or limited internet access among the population.

26. Does the System Make Workers More Efficient?

- **81%** believe that the system makes workers **more efficient**, suggesting that digital tools help streamline processes, reduce redundant tasks, and speed up operations.
- **15.7%** preferred not to say, which could indicate that some workers do not directly engage with the system or are unsure of its benefits.
- **3.3%** believe the system does **not** make workers more efficient, likely due to technical issues, lack of skills, or resistance to adopting new methods.

27. Is There Government Pressure to Use the System?

More than half of the respondents (54.3%) reported no pressure from the government to use the electronic payment system, indicating that while the system is available, its use might not be strictly mandated. However, a significant portion (35.2%) acknowledged feeling some pressure to adopt the system, which suggests a push towards modernization in some areas. The remaining 10.5% who preferred not to answer could indicate either uncertainty or reluctance to disclose their perspective.

28. Advantages of Using the System

A large majority of respondents (66.2%) recognized the system's efficiency and convenience as its primary benefits. This highlights the positive impact of electronic payments on streamlining processes and reducing the time required for financial transactions. Other benefits were cited by 22.9%, possibly including improved transparency, cost savings, and better record-keeping. However, 11% preferred not to express their opinions, which could reflect a lack of direct experience or understanding of the system.

29. Disadvantages of the System

Security concerns and technical issues were noted by 20% of respondents, highlighting apprehensions about data safety and system reliability. Additionally, 11.9% reported a lack of technical skills as a barrier, suggesting a need for more comprehensive training programs. Other disadvantages, cited by 16.7%, may include resistance to change, network instability, or issues with system integration. A significant number of respondents (51.4%) preferred not to comment, possibly indicating either unfamiliarity with the system or a reluctance to criticize it openly.

CHAPTER IV

USES OF E – PAYMENT SYSTEM IN AIZAWL

The fourth chapter is a study on the "Uses of e – payment system in Aizawl." This chapter is about finding the number of users for paying electric and water bills. Also, the commonly used or most trusted methods for making online transactions were also studied. Not only that, the other means in which the e – payment system have been utilised by the respondents were also studied in this chapter.

The present chapter aimed at fulfilling objective 3 (i.e., To evaluate the use of electronic payment system undertaken by Public Health Engineering Department (PHED) and Power & Electricity (P&E) Department, Government of Mizoram) by studying the utility of online billing services being provided by PHED and P&E Department.

This study employed a mixed – method research design to investigate the use of electronic payment system undertaken by Public Health Engineering Department and Power & Electricity Department, Government of Mizoram. Moreover, this study is descriptive in nature in that it aims to describe the current state of electronic payment system usage, identify patterns, and assess perceptions and experiences among the users in the services provided by the Public Health Engineering Department and Power & Electricity Department, Government of Mizoram in paying electric bills through online mode.

A total of 550 participants were selected using a convenience sampling method. Respondents, aged 15 and above, were chosen based on their experience with the electronic payment systems for utility services in Mizoram.

Data was gathered using a semi – structured interview and structured questionnaire divided into five sections to evaluate different aspects of the e-payment system:

Section 1: Demographic Information

This section collected information such as age, gender, education level, occupation, and location of residence.

Section 2: Awareness and Usage of E-Payment System

Questions in this section focused on respondents' knowledge about the e-payment system, duration of awareness, frequency of usage, and methods employed for making payments.

Section 3: Perceptions of Reliability and Trust

This section explored the reliability and security of the electronic payment system from the respondents' perspective, including any initial trust issues and challenges faced.

Section 4: Preferences and Efficiency

This section identified respondents' preferred methods of payment, their views on whether the e-payment system should replace traditional payment methods, and the efficiency of the current system.

Section 5: General Opinions and Recommendations

The final section collected general opinions on the system’s effectiveness, future potential, and recommendations for improvements.

Descriptive statistics, including frequency and percentage, were taken to summarise the responses and the patterns of citizens utilisation of government services through e – payment.

Discussion

Based on the findings of the study, the **Public Health Engineering Department** and the **Power & Electricity Department** of Mizoram appear to be successfully implementing the use of e-payment systems, since a significant portion of the population is already making use of these digital platforms for bill payments. The adoption rates show promising trends, with 68.18% of respondents using e-payments for electricity bills and 65.82% using it for water bills. This high level of usage shows that the government’s efforts to implement electronic payment systems for these essential services are bearing fruit.

The awareness on government e-payment systems is also high—91.45% of respondents are aware that the government has a website dedicated to paying utility bills. This shows that while people are not always familiar with specific initiatives like the MSeGS, they do recognize and are using the online infrastructure set up for their utility payments.

Google Pay (Gpay) has emerged as the most popular application for these transactions in the study, with 51.27% of respondents choosing it as their preferred method for making payments. This could indicate that while the government has its own systems in place, third-party payment platforms are more trusted or simply more user-friendly, possibly due to their widespread use across various sectors. However, cash still accounts for 22.73% of payments, and some respondents prefer a hybrid approach, using both cash and e-payments (13.27%), showing that traditional methods still have a place alongside digital systems. The following bar graph represents the usage of different applications for making online transactions.

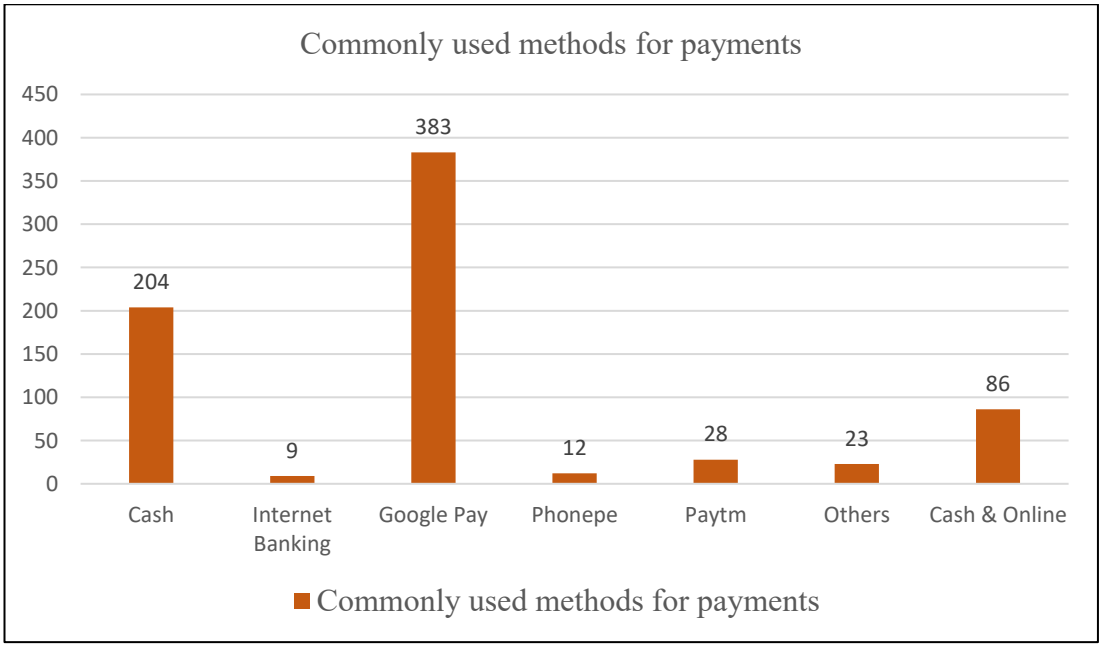


Figure 2: Bar graph representing the methods used for making payments

When it comes to reliability, a majority of respondents (92.55%) consider the e-payment system reliable for these payments, indicating confidence in the system's ability to handle utility transactions without major issues. However, some concerns

linger—around 6.91% of respondents expressed doubts about the system's reliability, often citing issues like technical glitches or internet connectivity problems. The following chart shows the opinion of the respondents with regards to their opinion on reliability of online mode of payment.

The government's infrastructure has also been improving over the years, according to 90.73% of the respondents who observed a positive change in the functioning of the e-payment system. This suggests that the departments managing these systems have been making continuous efforts to enhance the user experience, address technical issues, and streamline the payment processes.

However, there are still some challenges. A small number of users experience technical problems or connectivity issues, with 8.91% citing server-related issues. While this is a relatively small percentage, it highlights an area where the departments can improve by focusing on the system's robustness and ensuring uninterrupted service.

CHAPTER V

CITIZENS' AWARENESS IN ELECTRONIC GOVERNANCE

The fifth Chapter is a study on the “Citizens' Awareness in Electronic Governance.” This chapter highlighted the means through which the citizens had known the different projects that had been carried out through e – governance. The chapter studies whether they have frequently visited Government websites and were they able to get the information they had needed. The advantages and disadvantages of having online interactions with the Government had also been highlighted.

A quantitative research design was adopted to evaluate citizens' awareness in the e-governance process on key areas such as the level of engagement, interaction, and overall experience of citizens with electronic governance services.

Respondents were selected using a convenience sampling method, which included a diverse group of 550 respondents aged 15 and above from Aizawl. All the participants were asked questions whether they had engaged with or had experience using electronic governance services to reflect the demographics of the population and their interactions with e-governance initiatives.

The data collection instrument consisted of a structured questionnaire designed to gather comprehensive information about respondents' demographics and their engagement with e-governance. The questionnaire consisted of open – ended and close – ended questionnaire. The questionnaire was divided into two main sections:

1. **Respondent Profile**: This section collected demographic information, including age, gender, locality, educational background and occupation.
2. **Questionnaire**: This section included several subsections focusing on key aspects of e-governance:
    - **Awareness and Knowledge of E-Governance**: This part included questions to assess the respondents' level of awareness and understanding of e-governance initiatives.

- **Interaction with E-Governance Projects and Government:** This subsection focused on gauging the respondents' awareness of specific e-governance projects and their direct interactions with such platforms.
- **Opinion on E-Governance and Online Interactions:** Questions in this section explored respondents' perspectives on the efficiency and effectiveness of e-governance services, as well as their satisfaction with online interactions facilitated by the government.

The analysis of the collected data involved the use of descriptive statistics, including frequency and percentage calculations using MS Excel 2019.

Discussion

The exploration of challenges faced by the government in implementing electronic governance (e-governance) shows significant gaps in administrative functioning and service delivery. While the data collected provides some positive insights, a closer analysis reveals troubling trends in terms of accessibility, citizen engagement, and the overall effectiveness of e-governance initiatives. The findings in relation to the study's objectives can be discussed further, focusing on key themes such as demographic barriers, low awareness of e-governance, limited interaction with government projects, and deep-rooted dissatisfaction with online services.

The study's findings show a number of trends in citizens' awareness in Mizoram's e-governance initiatives, though the data also suggests several areas where engagement remains limited or unclear.

1. Awareness and Knowledge of E-Governance

The fact that just over half of the respondents (50.91%) were familiar with the term "e-governance" may indicate that public awareness is growing, but the nearly equal portion of respondents (49.09%) who had not encountered the term suggests that these efforts may not have reached a significant part of the population. The data showing that 76.73% of respondents were unsure which authority manages e-governance could also indicate a lack of effective communication about how these initiatives are structured.

Similarly, the low level of recognition of the MSeGS, with only 25.27% of respondents aware of it, may indicate that this key nodal agency has not effectively communicated its role to the public. This could be a factor limiting deeper citizen engagement.

The study's finding that social media (15.82%) and TV news (14.73%) are the main sources of information about e-governance may also indicate that these are the most effective channels for outreach. However, the fact that 47.45% of those unaware of e-governance attributed their lack of knowledge to a lack of interest suggests that simply increasing information is not enough. This shows that the government needs to make e-governance more relevant to everyday concerns or emphasise its practical benefits more clearly.

2. Interaction with E-Governance Projects and Government

The fact that only 31.64% of respondents were aware of specific e-governance projects may indicate that that citizens do not fully understand how these projects could benefit them. The limited awareness of projects like E-District (6%) and E-Bharat (3.82%) shows that these services are either underused or not seen as essential by the people.

Nearly 80% of respondents were unaware of Government-to-Citizen (G2C) services. If such an important aspect of e-governance remains unfamiliar to so many, it may point to a disconnect between the government's intentions and the public's awareness or interest in engaging with these systems.

However, the finding also shows that 81.64% of respondents knew they could interact with the government online shows that the concept of e-governance is somewhat understood, even if the specifics are not. The fact that only 32.18% of respondents frequently visited government websites may indicate that while people are aware of online options, they may not find them particularly useful or accessible in practice.

3. Opinion on E-Governance and Online Interactions

The divided responses on whether online interactions have improved government services (56% agreeing, 43.45% disagreeing) may indicate that while some citizens see benefits, others may not. This may reflect differing experiences with the quality or

efficiency of these services, or it could suggest that the benefits of e-governance are not equally distributed or perceived.

Similarly, the data on trust in online platforms, with 54.91% expressing trust and 43.27% not, may indicate that there are ongoing concerns about privacy, security, or the reliability of these systems. This uncertainty may prevent broader adoption, and addressing these issues can result in increasing trust and participation.

Only 4.18% of respondents felt that e-governance projects had increased citizen awareness or participation, which may indicate a failure to clearly communicate the advantages of these initiatives or to demonstrate their impact on people's daily lives. The fact that nearly 95% of respondents did not see these projects as improving awareness or participation may suggest a significant gap between the government's expectations and the public's perception.

4. Perceived Benefits and Future Encouragement

The strong majority (90.73%) of respondents who supported further encouragement of online interactions might indicate that despite the current limitations, there is a general openness to the idea of e-governance. The data showing that 47.09% believe online services save time and 43.82% find them convenient may indicate that those who do use these services see practical advantages, even if overall usage remains low.

Overall, the study's findings show that while there is some awareness and support for e-governance in Mizoram, many challenges remain in terms of engagement, trust, and effective communication. The study findings show that citizens may not fully understand the benefits or functions of e-governance, and many are either unaware of or uninterested in the services offered. This means that there is a need for more targeted outreach and efforts to build trust in online government platforms. Without addressing these barriers, the potential for widespread participation in e-governance may remain unrealized.

CHAPTER VI

CONCLUSION

The final chapter consisted of three parts: replies to study questions, findings, and suggestions. Since it integrates the literature on findings and recommendations from the entire thesis, this chapter represents the study's conclusion. Based on the research conducted in the earlier chapters, this last chapter aligns with the thesis's research questions. The results and recommendations that follow are explained in order. The chapter ends by outlining the research's shortcomings and how they may affect future investigations.

In the earlier Chapter i.e., Chapter I, we had talked about the Gartner Model of e – Governance that is of practical importance in which there are four stages of e – governance. The first stage is “Presence” in which the availability of information on various Government platforms were talked about and not only that the flow of information is unidirectional. The second stage is “Interaction” where the interactions were made available between government and various parties. The means of communication is a two – way process in this stage and the interactions were made available in online mode. The third stage is “Transaction” phase in which online payments are made available to the Government and other variety of services. The last stage is “Transformation” phase in which optimum use of available technology for revolutionising the government services has been highlighted. So, upon taking this theory for consideration into the present study, we can say that we are in the transaction stage of Gartner Model of e – Governance and we are on the path of the “transformation”.

This research set out to explore the electronic governance and service delivery in Aizawl District by administering a study on – the digitalisation of Government offices, e – payment of water and electricity bill, citizens participation in e – governance. The study found that the Government offices have been operating in blended mode i.e., using papers and digital technology like computer and mobile phones for doing daily office work. Besides paper works, in emergency or urgent situation, email and whatsapp were often used as a means of communication. The Secretariat offices has

been preparing itself for pilot study on e – office which was planned to be operated by mid – year of 2025.

The e – payment system has proved a lot of help to the users as it is very convenient and time – saving for them. E – payment has also been used for shopping and payment of certain other processing fees besides it is being used for paying water and electricity bills. But there are some drawbacks with the use of this system mostly due to unstable network connectivity and server error.

The study also found that the respondents were mostly aware of the projects of MSeGS by their name but were not aware that it has been a part of the projects that has been carried out by the nodal agency for the state i.e., MSeGS. When the respondents were asked their reasons for not being aware, the most common answer was that they do not have any concerned about the projects, while some are saying that there is no proper awareness about the use of the system and there are few who said that they have no specific reasons. From the respondents feedback, we found that an important means to increased citizens participation is increasing the efficiency in the work of the government employees in order to give a regular update on their websites and programmes. Increasing awareness of various Government initiatives among the citizens is believe to help in having more interests in it and thus increased participation. Also, utilising RTI, Government websites and service offered by the government for getting information and any other related matters will increase knowledge of the Government where about and the rights and privilege of the people itself. If one is aware of their rights, it will enable to be more active and thus ensure more involvement in any government function up to the extent of permission.

However, the study focused on few selected samples in the three cases studied limit the generalizability of the findings. Future studies should examine the technology and intervention of e – governance in the daily functioning of the Government and the people in a more diverse population to confirm these results and explore potential intervention strategies. In conclusion, while the findings highlight a significant used and intervention of computer, e – payment and e – governance initiatives, further research is necessary to develop effective interventions that can help in improving the drawbacks.