ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN EFFECTIVE PUBLIC SERVICE DELIVERY OF LOCAL BODIES

(A Case Study of Pawera & Chaumala VDCs of Kailali District)

A Thesis

Submitted To Central Department of Rural Development in Partial Fulfilment of the Requirements for the Degree of Master of Arts in Rural Development

Submitted By

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LETTER OF RECOMMENDATION

This thesis entitled ***Role of Information and Communication Technology (ICT) In Effective Public Service Delivery of Local Bodies: A Case Study of Pawera & ChaumalaVillage Development Committees (VDC) of kailali District Of Nepal***has been completed by **Mr. Durga Prasad Bhatta** under my guidance and supervision in partial fulfilment of the requirements for the Degree of Master of Arts in Rural Development. I hereby forward this thesis for its final evaluation and approval.

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(10 Oct. 2017)

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APPROVAL LETTER

This is to certify that the thesis entitled ***Role of Information and Communication Technology (ICT) In Effective Public Service Delivery of Local Bodies: A Case Study of Pawera & ChaumalaVillage Development Committees (VDC) of Kailali District Of Nepal***and submitted by **Mr. Durga Prasad Bhatta**, in the prescribed format of the Faculty of Humanities and Social Sciences, has been examined and accepted as partial fulfilment of the requirements for the Degree of Master of Arts in Rural Development.

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DECLARATION

I, Durga Prasad Bhatta, wish to declare without any doubt or contradiction, that this research is a true discourse of my own original investigations and any other information used in the study have been cited appropriately.

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ABSTRACT

In this age of modern technology, we are trying to make our lifestyle easier. ICT is rapidly growing phenomenon. It has an increasing impact on the work of public sector organizations. ICT is the use of information and communication technology by public sector organization for governance. ICT is a process and it is and emerging trend to reinvent the way of government works. People, process, technology and resource are the major components of ICT. Like other countries Nepal has also use ICT based tools and technologies in private as well as government offices. The main objectives of the study Role of Information and Communication Technology (ICT) in Effective Public Service Delivery of Local Bodies was to identify the status of traditional service delivery of local governance and modern ICT tool & technology used in local bodies. This study was conducted on Pawera and Chaumala VDC of Kailali District during the period of October to December, 2016 the main objective of the study was to find out role of information technology (ICT) in public service delivery in government office. The study used questionnaire, interview and key informant. Primary information was acquired through filling questionnaires. The beneficiary's public form Pawera and Chaumala VDC were respondents of the study. The sampling public were 25/26 form each VDCs. Sampling public are those who were benefited from VDC darning taking service. Interview to key informants was another method adopted for the study. Secondary data were acquired from different reports, documents and related websites.

Public service delivery in Nepal has been described as poor, inefficient and ineffective. It is often subject of ridicule because of its rigidity. There are problems of corruption, transparency and accountability, high cost of administration and wastage. The deployment of Information and Communication Technology (ICT) in the public service delivery has not made much difference. It is therefore necessary to examine ICT in Nepal public sector and the ways it has impacted on its service delivery using local government as a study. At lowest unit (VDC) of public service delivery it's identify that there is resource inadequate (ICT equipment, internet connectivity, human resource). For quality, timely and efficient service delivery basic ICT infrastructure is necessary. Public wants timely, easier method of their needs and services. IT based service easy address the public needs. In research study compare traditional file based and computer based

vital event registration system. It's find that computer based online vital event registration system was such easier and fast service for public.

To improve the efficiency, transparency and wide range of public service delivery there is need of ICT. The use of ICT tools help in strengthening social networks, empowerment and participation, as well as fostering productive processes at the local level through the provision of employment and skills, as well as support services for micro-enterprise activities. In rural communities of developing countries, with limited capacities and resources to respond to the effects of extreme natural hazards, drought, landslides, floods, and to the impacts of these events on local social systems (e.g. health, infrastructure, agriculture, transportation, migration), ICT tools are emerging as an area of increasing interest. Finally use of IT is e-governance which means easy governance, effective governance and economic governance. Nepal is in the new stage of federal and reconstruction its opportunity to setup of ICT based service in municipalities and their wards . Digitizing the working procedure of government of Nepal for future.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS/ACRONYMS

C2G	:	Citizen to Government
CAC	:	Community Awareness Center
CBO	:	Community Based Origination
CBS	:	Central Beauro of Statics
CD	:	Capacity Development
CDRD	:	Central Department of Rural Development
G2B	:	Government to Business
G2G	:	Government to Government
G2C	:	Government to Customer/Citizen
GIDC	:	Government Integrated Data Center
DDC	:	District Development Committee
DOCR	:	Department of Civil Registration
E-governance	:	Electronic Government
LGCDP	:	Local Government and Community Development Programme
ICT	:	Information and Commination Technology
IT	:	Information Technology
ICT4D	:	Information and communication technologies for development
LB	:	Local Bodies
MoFALD	:	Ministry of Federal Affair and Local Development
MIS	:	Management Information System
NGO	:	Non-Government Organization
NITC	:	Nepal Information Technology Center
SM	:	Social Mobilizers
SMS	:	Short Messaging System
VDC	:	Village Development Committee
VERSS	:	Vital Event Registration and Social Security
UNDP	:	United Nation Development Programme
UN	:	United Nation

CHAPTER I
INTRODUCTION

1.1 General Background of the Study

Citizen oriented governance is one of the most important considerations for the governments all over the world who are busy steering their respective countries into the 21st century. With the awareness levels of the common people on the rise, citizens demand more access to government information and an effective and easy interface in their dealings with the government. A more informed citizen is in a better position to exercise his/her rights, and better able to carry out his/her responsibilities within the community. Obviously then, more and more citizens these days expect to be involved in the process of governance and to receive a higher standard of service and care from their Governments. In the digital age of today, the best answer to this need is the utilization of Information Technology (IT) as an effective tool for catalysing activity

An effective e-governance IT can go a long way in transforming the way people relate to the government, our focus shifts to the word 'effective'. What's much more important than the decision to have a website for a government entity is the way it is developed and the content it carries. Websites are a powerful channel to facilitate e-governance. It would take a lot of commitment and planned efforts on the part of the governments to make the concept work and bear fruit. They will need to provide unparalleled service with an attitude of genuine helpfulness delivered in new ways fostered through relentless innovation (wikipedia. retrieved October 14, 2016, from https://en.wikipedia.org/wiki/Information_and_communications_technology).

MoFALD has initiated the procedure to obtain uniformity in website and IT infrastructure in the Local Bodies for effective and efficient flow of information to all citizens, and both governmental and non-governmental organizations.(LGCDP Programme Document: 2013-2017).

Electronic governance or e-governance is the application of information and communication technology (ICT) for delivering government services, exchange of information communication transactions, integration of various stand-alone systems and services between government-to-customer (G2C), government-to-business (G2B), government-to-government (G2G) as well as back office processes and interactions

within the entire government framework. Through e-governance, government services will be made available to citizens in a convenient, efficient and transparent manner. The three main target groups that can be distinguished in governance concepts are government, citizens and businesses/interest groups. In e-governance there are no distinct boundaries. Generally four basic models are available – government-to-citizen (customer), government-to-employees, government-to-government and government-to-business.

Many countries are looking forward to for a corruption-free government. E-government is one-way communication protocol whereas e-governance is two-way communication protocol. The essence of e-governance is to reach the beneficiary and ensure that the services intended to reach the desired individual has been met with. There should be an auto-response to support the essence of e-governance, whereby the Government realizes the efficacy of its governance. E-governance is by the governed, for the governed and of the governed.

E-government is the use of information and communications technologies (ICT) to transform the traditional government by making it accessible, transparent, effective and accountable. E-government does not mean putting more computers on the desks of government officials. And e-government is more than just a government website on the Internet. Political, social, economic and technological aspects determine e-governance. It establishes a relationship between government officials and citizens, providing greater access to government information and services by making the government accessible online; promoting citizen participation by enabling citizens to interact more conveniently with government officials, such as by requesting government service and filing required documents through website; increasing government accountability by making its operations more transparent, thereby reducing the opportunities for corruption; and supporting development goals by providing business, rural and traditionally underserved communities with information, opportunities and communications capabilities.

E-government is not only used in developed countries. Some of the most innovative uses of the Internet in governance are being successfully used in the developing countries.

E-government will not be successful just only buying more computers and putting up websites. It’s not sufficient to automate administrative practices from the paper system

to digital system. Rather, e-government is a process of transforming government; it requires planning, political will and a sustained dedication of resources. Success of e-government will not be guaranteed with the mere purchase of advanced technology or the direct automation of complex procedures until it can increase the rate of citizen participation there by bringing about the greater effectiveness in government. Technology introduction cannot change the mentality of bureaucrats who do not view the citizen as valued customer of government or an important participant in decision-making.

(UN Publication 21 October 2016 from https://publicadministration.un.org/egovkb/en-us/reports/un-e-government-survey-2014).

1.2 Statement of Problem

Nepal is the country locked by the largest two countries India and China. The variation in the structure is also another geographical identification of Nepal. Although it is small in map but we are always survive under the various large problems. Today, we have ability to talk about different technology either about past, present or future. We are in 21st century, but our education pattern, administrative pattern, working pattern are still in 19th century. Now our competition is not only between us but also with world. ICT is a most important aspect of today's world. We cannot imagine our day to day life without ICT. Undeniably to a large extent, the success of any sector or organization today depends on the application and effectiveness of the ICT. The scheme to provide ICT literacy and enhance the knowledge of ICT students and professional in Nepal has a slow progress and is not sufficient.

Although political, economic, social and technological challenges are available in our country. Today, Government is willing to decentralize and towards to federalism, the responsibilities and processes throughout the system called e-government. Where government rule the country directly focused for the facilitation or empowerment of the peoples of the country. In the context of Nepal there are mostly villages and in hilly areas. Those villages are still out of direct connection to the government. So for the entering the e-government, first of all developing the e-village may be Golden Gate. For establishing the e-village the government can provide most of the services such as policy making, birth and death registration, application for citizenship, passport and driving license, personal ID for TAX etc. To implement this services awareness of local people or villagers is most important.

Implementation of ICT has changed the way of living of the people in many countries. However, in Nepal the implementation of ICT is little difficult because of its developing status. The government agencies find lot of difficulties in the smooth implementation of ICT in Nepal because of low literacy, low per capita income, insufficient infrastructure and limited financial resource.

Governance and its service process should be well reengineered to fulfil the aspirations of its citizens. Information and Communication Technology (ICT) and its tools can help its effective and efficient transformation.

Review of Literature reveals that very little progress has been achieved in the areas of ICT. Use of ICT in only in much more in private sector as well as in urban Local Bodies. The IT infrastructure in very poor and not well managed in Nepal. Research problem can be presented as:

- Problem and prospects of use of ICT in Local Bodies.
- Relation between public, local governance and use of IT in area of research.
- Role of ICT for E-governance, public service delivery and good governance.

1.3 Objectives of the Study

The general objective of the study to analyse the use of ICT in local governance and way forwarding. The specific object of the study are:

- To identify problem and prospect of use of ICT in local bodies.
- To find out importance of ICT for E-governance.
- Role of ICT for effective public service delivery of local bodies.
- To recommend policy measures for E- governance in the study areas with reference to IT infrastructure.

1.4 Significance of the Study

The strategic objective of e-governance is to support and simplify governance for all parties - government, citizens, businesses and its employees. The use of ICTs can connect all three parties and support processes and activities.

There may be two major objectives of e-governance: This objective of e-government is to satisfactorily fulfil the public's needs and expectations on the front-office side, by

simplifying their interaction with various online services. The use of ICTs in government operations facilitates speedy, transparent, accountable, efficient and effective interaction with the public, citizens, business and other agencies.

In the back-office, the objective of e-government in government operations is to facilitate a speedy, transparent, accountable, efficient and effective process for performing government administration activities. Significant cost savings (per transaction) in government operations can be the result. In government of Nepal there is no specific strategy and policy for E-governance.

MoFALD just take initiation for e- governance as pilot programme in Local Governance and community programme Phase-II. The study will be helpful and fruitful for further strengthen e-governance system in Nepal.

1.5 Limitation of Study

The study has certain limitations and some of which are:

- The research is limited on few organizational aspects and it does not explore others organizational factors like provisions, the role of outsourced human resources political and administrative leadership.
- The effectiveness of ICT based services looked form only one angle i.e. improvement in service delivery and the study does not take into consideration others objectives like ensuring transparency, reducing corruption reducing cost and quality of services.
- The study is done only two government offices and thus it might lack of the general applicability to other public organizations.
- Even with the organization the study concentrated only on the effectiveness of eservices in the present scenario, it did not attempt to learn 'before – and – after' ICT application situation.

1.6 Organization of the Study

This study has been divided into seven chapters these are as follow:

Introduction: The first chapter deals with background, introduction of Information Communication Technology (ICT), statement of the problem, rational of the study, objective of the study, scope and limitation of the study and organization of the study.

Literature Review: The second chapter deals with introduction of ICT, role and importance of IT for public service delivery of local bodies, status of ICT in Nepal, impacts of IT in public life style.

Research Methodology: The third chapter contains research methodology adopted for the study. In this chapter research design, sources of data collection, rationale for the selection of the study area, sampling size and procedure, data collection techniques and tools, interview survey, key informants interview, field visit and observation, data tabulation and analysis.

Study Area: This chapter deals with introduction of the study area, background, ICT, IT tool and technologies, governance scenario etc. Mainly Study area covers Pawera and Chaumala VDC of Kailali Dsitrict.

Finding and Discussion: This chapter contains findings from study area, local people's perception of ICT, Impact of ICT on public service and information dissemination, effectiveness of ICT, compression of traditional manual system and computerized system for public service delivery, specially detail study of MIS system.

Impact of ICT: This chapter deals with impact of ICT observed from field study and compared with literature. It includes impact of ICT on public service delivery, information dissemination, and transparent social security distribution.

Summary, Conclusion and Recommendations: The chapter contains summary and conclusion of the study. After that some necessary recommendations are presented.

In the last part of the study, photographs of the study area, maps of the study area and bibliography have been included. Necessary annex are also included after bibliography.

CHAPTER II
REVIEW OF LITERATURE

The main objective of this chapter is to analyze the research work and clarify the need for the study on rationale basis. This chapter includes review of literature as introduction of local bodies, local governance, and traditional mechanism of public service delivery, ICT and role of ICT for public service delivery, IT for transparency, effective, timely efficient public service delivery and future scope of ICT for people connectivity and development for the nation.

2.1 Introduction of Local Bodes and Local Government

The Federal Democratic Republican of Nepal is a landlocked country in South Asia and the world's youngest republic. It is bordered to the north by the People's Republic of China, and to the south, east and west by the republic India with an area of 147181 square kilometres and population of approximately 30 million. More than 84 percent people of the country live in rural area and development is the prime need of the national development. Rural development is a multidimensional concept which encompasses the improvement of economic and social well-being of the rural people. Theoretically was widely connected with decentralization in our country immediate after the introduction of these stages of the development strategy pre-fifties, market led development strategy in fifties, sixties and seventies, NGOs led development strategy in Eighties (Bhattachan, 1997, p:3).

The VDC is the lowest unit of local govt. institutions. Each district have between 13 (Manang) to 114 (Saptari) VDCs. And each VDC is divided geographically into 9 wards, each represented by an elected ward committee. The chairman and vice-chairman of the VDC are elected by the voters of the VDC, on system of adult franchise. One member from each ward is also elected as a ward chairman. These direct elections are held on party basis. The VDC has the mandate to formulate the implement the development plans on the basis of its own resources, grants received from govt. and from NGOs or CBOs. The VDCs received grants to the tune of Rs.15 to 30 Lakh from the centre. The VDC level projects are executed and co-ordinate through user committees and NGOs. The VDC has to follow the directives issued by

the govt. and DDC in relation to the formulation and implementation of village level plans. Their responsibilities to formulate and implement village level plans are significant. However, VDCs are institutionally very weak e.g. VDCs secretary is a govt. employ who is meant to provide administrative support under the direction of DDC chairman. But the secretary's salary (as well chairman and vice- chairmen) has been paid out from the development block grant (Gurung, 2003, p: 29).

Municipalities are the lower tiers of political institutions for urban areas. In each municipality, voters directly elect a Mayor and Deputy Mayor on the party basis. Members of the municipality council also include one elected member from each ward of the municipality. How many wards there are, depends on the size of the town or city. They have mandate to formulate town development Plans and implement the development Projects on the basis of there on resources, grant received from govt. of Nepal, DDC and national and international NGOs. The municipalities have to follow the directives issued by the government and DDC in relation to the formulation and implementation of Town development Program. They can also execute and co-ordinate their programs through user groups and the elected ward committee. The executive secretary of the municipality is an employ of government that provides administrative support (Gurung, 2003, p: 29). The chairman and vice- chairman of the DDC are elected indirectly on a party basis by the chairman and vice-chairman of each VDC in the district (Mayor and Deputy Mayor of municipalities). DDC members are also elected indirectly on an Ilaka (area basis). An Ilaka is a grouping of several VDCs. Each of the Ilakas VDC chairman and vice-chairman on political party basis- elect one of their own to represent the Ilaka at the district. Thus, final size of the districts development Committee can range from 9 to 17 members, plus a chairman and vice-chairman. Members of the parliament of the concern district are ex-official members (Gurung, 2003, p: 27).

The prime need of the national development is the development of rural area of Nepal. In multiparty system, particularly in Nepal and the global wise of parliamentary system in general has an importance of local self-governance. Today, local government and politics have become focal points of democratic political development Nepal is the synonym of village where about 84 percent people live in rural area of Nepal. Without the development of the village the nation can't be

developed. Therefore, an existence of a strong local self-government has been badly felt in need for the national development. In this regards the local government can play an important role. In this regard local institutions need development of power, autonomy and freedom of decision on local issues. Except the decision of national importance such as defence, foreign affairs, education, finance, national plan and so on it can carry out these functions where are of peculiar concern of the locality such as water supply, sanitation, maintenance of public buildings, running of public utility services, local transport etc. The essence of all function is that they a purely local in charter and need local solution in difference to the requirements of the people inhabiting that locality. Therefore elected representatives of village development community, DDCs have a vital role to lead ahead the development fate of the country.

Decentralization is the process of transforming the function central government to the local strategy from which the genuine participation of people in decision making level and be possible. So Local Self Governance Act-1999, focused on the process of decentralization under its "make previous conductive to the enjoyment of the fruiters of democracy through the utmost all participation of the sovereign people in the process of governance by way of decentralization" (LSGA, 1999,Preamble).

Decentralization has got the constitutional important since the provision of constitution of Nepal. Later on Decentralization Act 1982, Decentralization Regulation 1984, Local Self Governance Act 1999, Local Self Governance Regulation 1999 and Local Body Regulation 1999 were the remarkable steps on decentralization scheme (Dahal, 2003, p: 293).

District development plan is one of bridge between national developments of rural area of Nepal. Nepal is synonym of village where move then 84 percent people lives in rural area of Nepal. Nepal without the development of the village the nation cannot be developed. Therefore development must be a product of human brain under a certain need. Development planning at the grass-roots level should be stress or the fulfillment of the basic needs of the people as a means to end, the end being the improvement in the quality of life (Sharma, 2006, p: 4). Therefore, an existence of a strong local self-government has been badly felt in need national development can play an important role. The various aspect of DDC has a vital role to lead ahead the development of the country.

2.2 Introduction of ICT and Its Status in Nepal

Historically, the term information technology referred to all the technologies associated with the gathering, processing, storing, and dissemination of information. However, with the passage of time and the progress of technologies, the term has acquired different connotations. The modern term, Information Technology (IT), came into widespread use only in the late 1970s and is now used generally to embrace both computer and communication technologies and their common basis – microelectronic technology and all the related software technology.

Until the 1970s, computer and telecommunication technologies were still regarded as quite distinct. However, powerful technology changes in microelectronics, software, optics and increasing integration of telecommunications with computer technologies have made this distinction increasingly less meaningful. Microelectronics technology has been the common basis both for rapid development and the convergence of computer and telecommunications technologies.

With the advent of the information age, the ways we work, study, and live have been xperiencing dramatic changes. Due to the influence of economic and information globalization and the rise of the digital economy, governments are "reinventing" themselves to meet new expectations and the priorities of citizens and businesses. These dynamics are compelling many governments to create a new vision for its relationship with businesses and citizens and to create a new organizational structure to fulfil its mandate. E-Government can fulfil the mandate of government formulating a new vision of how government views its citizens, employees and businesses, and building a citizen-cantered, service-oriented, public-participative government with efficient, accountable, transparent and performance government system. ICT based online service is the most democratic and unbiased service system. It offers equal opportunity to all races, genders, ethnic groups.

E-Government breaks the barrier of geographical diversity and makes the government services handy to all citizens at villages who are even not connected by roads and opens up many opportunities, provided Internet connectivity is available either through wireless communication, fibre optic cables, dial-ups, VSATs or whatever other medium.

Besides providing service to citizens, it's important to empower and motivate government employees to expect better service from them. E-Governance should transform the government workers into empowered knowledge workers. Nepal should not miss the benefits of global economy and specially the benefits offered by Internet (Wikipedia)

2.3 Importance of ICT and Useful Tool Used For Public Service Delivery

New developments in ICT are fundamentally changing the way we live, work and interact with each other. Shifts to digital technology mean that citizens' expectations for technology enabled government services have raised significantly in recent years. This shift in expectations coupled with the financial pressure on Government to transform and "do more and better with less", presents new opportunities to deliver better outcomes for citizens, and public servants.

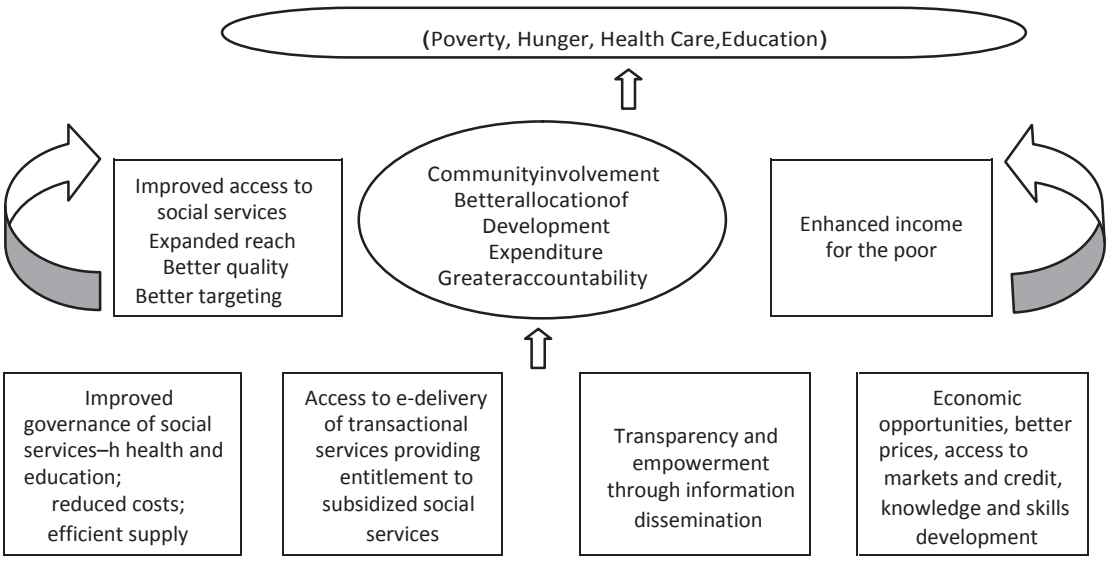


Figure 1 : Different Types of ICT Applications for Rural Poor

(Source: ABD Public Service Delivery Role of Information and Communication Technology in Improving Governance and Development Impact)

The potential for improvements through the innovative use of technology is significant. Implementation will require a transformational program of change, not just technological but administrative and cultural also.

E-governance has various aspects associated with it such as, government portal, national ID, E-service Delivery, E-education, ICT infrastructure, enterprise architecture, Public Key Infrastructure, Integrated Data and Training Center, etc.

With the emergence of ICT and E-government, it is possible to improve efficiency and effectiveness of internal administration within government and to re-locate government services from government offices to locations closer to the citizens.

Information and communication technologies for development (ICT4D) refers to the use of information and communication technologies (ICTs) in the fields of socioeconomic development, international development, and human rights. The theory behind this is, more and better information and communication furthers the development of a society.

2.3.1 Importance of ICT and Application Areas

Sectoral and Thematic Applications

Development work is categorised by sectors and themes by the international development assistance community. Sectors are made up of the following: infrastructure; industry; agriculture; natural resources; health; education; private; and public. Agriculture, education and rural livelihoods are the most extensively studied sectors. CT tool and technologies can be used by these listed sectors.

Civic Engrailment

Civic engagement plays a large part in E-Government, particularly in the area of Transparency and Accountability. ICTs are used to promote openness in the government as well as a platform for citizens to report on anomalous government activities for the purpose of reducing corruption and in promoting efficiency.

Climate, Weather and Emergency Response

The use of ICT in weather forecasting is broad. Other weather satellites, weather radars, automatic weathers stations and wind profilers.

People with Disabilities

ICT and disability work give disabled people a powerful tool in their battle to gain employment, Increase disabled people's skills, confidence, and self-esteem, Integrate disabled people socially and economically into their communities; reduce physical or functional barriers and enlarge scope of activities available to disabled persons develop a web content that can be accessed by persons with disabilities especially the visually impaired and hearing impaired.

Education

One of the main sectors that ICT4D aims to develop is education. Education is recognized as an important factor in addressing and solving social issues that exist in societies. While education indeed is recognized as important in addressing social issues, the limited resources that countries have also limits the expansion and quality of education that is being delivered by traditional educational systems.

Rural livelihood

A Poor families in the rural areas have limited or no access at all to information and communication technology. However, these people also needs access to ICT since this technology would help lessen their expenses on their resources like time, labour, energy, and physical resources, thus, would have a greater positive impact on their livelihoods and incomes agriculture is the most vital sector for ICT intervention most especially that majority of the population around the world rely on agriculture to live sustainably.

Agriculture

ICT used in access to price information , access to agriculture information, access to national and international markets, increasing production efficiency, creating a conducive policy environment. These access are possible when people are connected by IT technology.

Health

Information technology applied to health and health care. It supports health information management across computerized systems and the secure exchange of health information between consumers, providers, payers, and quality monitors.

Environment

The government, civil society and private sector are encouraged to use and promote ICT as instruments for environmental protection and the sustainable use of natural resources; to implement green computing programs; and to establish monitoring systems to forecast and monitor the impact of natural and man-made disasters.[Nayak, S. K.; Throat, S. B. and Kalyankar, N. V. (2010)]

Government of Nepal has also recognized the importance of the ICT, the government public service delivery in long haul is meant to be provided with the collaboration of the ICT for a paperless governance; e-governance.

Local Bodies are the front runners in providing service delivery to the public. Even after the promulgation of new constitution of local bodies still remain the first link between the government and the public.

MoFALD has recognized the impact ICT can have on efficiency of service delivery. MoFALD through its LGCDP –II program currently have ICT Volunteers (Electronics and Computer Engineers) stationed at the DDCs and municipalities across the nation.

If not all, most of the service delivery through local bodies shares a common ground. If we can analyze digitization of one local body then with little derivation this study aims to be a guideline for other local bodies as well.

2.3.2 Traditional Service Delivery System

Public sector organizations the world over are under pressure to deliver quality public services that are responsive to peoples' needs, choice and access. This has

called for adoption of modern technologies to re-engineer work processes and improve on communication channels.

Within the past dozen or so years, governments across the globe and at all levels have adopted electronic government (e-government) as a means of delivering of governmental information and services 24 hours per day, seven days per week.

Nearly all countries across the globe, from the poorest countries to the most advanced ones, have some sort of work done for so-called e-government fundamentals. Nepal is no different.

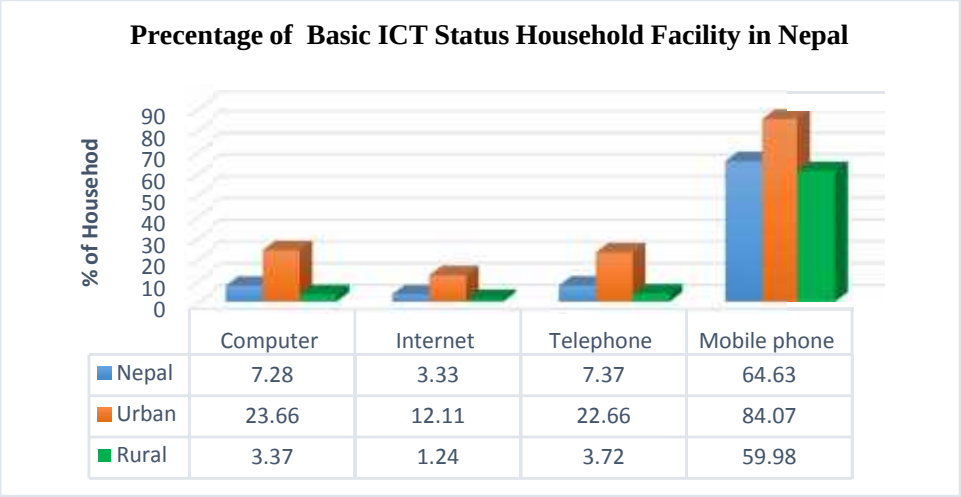
The first notable step towards ICT in any kinds of governance in Nepal was the use of Computer (IBM PC 1401) for the first time during the Census of 2028 B.S for the purpose of data processing. Yet, still Nepal has not achieved full potential.

However, with the establishment of the National Computer Centre various technical training programs were conducted. With the change in political scenario of Nepal, the policy of Economic Liberalization was adopted which opened the way for private sector involvement in ICT. It further enhanced the ICT usages in Nepal.

In the 9th periodic plan (2054-2059 B.S), policy of expanding computer education in schools, high level technical trainings for higher studies, establishment of IT parks were adopted. During this period, the use of computer in Planning and Management section of Government offices was started. The 9th periodic plan also saw the promulgation of Information Technology policy 2057. Grant were made available to the four universities so as to help develop and expand the ICT education in Nepal. Electronic Transaction act, Cyber laws were made and IT Park was established in the Banepa.

The percentage of households having various kinds of household IT facilities is tabulated as follows.

Figure 2:Basic Information Technology Status of Nepalese Household

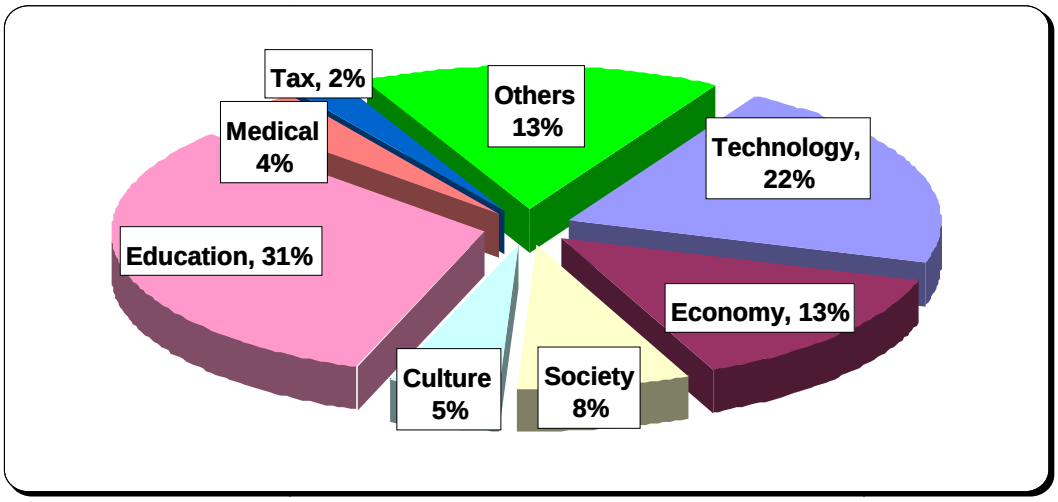


(Source: CBS Report 2011)

Figure shows the basic IT coverage in the Nepal is very low even in urban areas.Information That the Public Needs.

Information that the public needs is in the orderof education (31%), technology (22%) and economy (13%) information. Those in the age group of students have high interest in education-related information, while those aged above 40 and those in the service industry have higher interest in economy. This indicates what kind of information needs to be provided through the use of ICT.

Figure 3: Information That the Public Needs

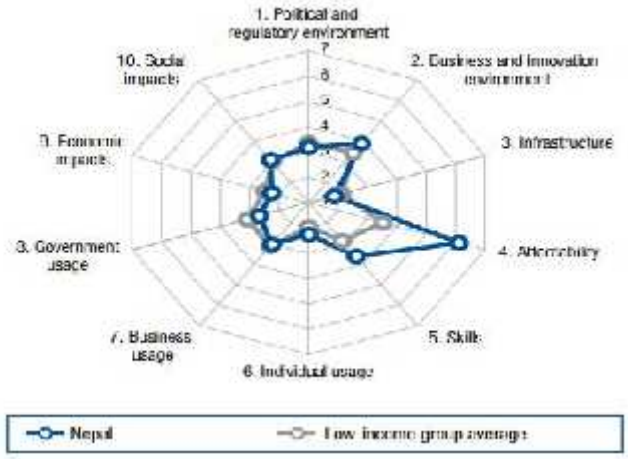


(Source: e-Government Master Plan Consulting Report Nepal 2013)

2.3.3 Morden (ICT) Based Service Delivery System

The Global Information Technology report services published by the Word Economic Forum which measure the ICT revolution globally, using the network readiness index. The index has evolved over times and currently assess the states of using different 53 indicators.(WEF:2016). Figure shows the Nepal has very low indictors. Only affordability indicator is very high which means private sector using ICT in for their business and more. Affordability means there is high penetration of mobile coverage that means we can use IT for rural areas and public connection and touch. Other remaining indicator shows for complete implementing of ICT in Nepal there is need of these sector indicators.

Figure 4: Global Information Technology Status of Nepal 2016



(Source: Word Economic Forum)

To fulfil the vision undertaken while promulgating the Information Technology policy 2057, [to establish Nepal in the Information Technology Map of the world], e-Governance Master Plan was promulgated, which is in implementing phase. NITC and GIDC was established and which is functional. This vision of Government of Nepal is collectively supported by its line ministries. Ministry of Federal Affairs and Local Government also have its role to play in it. Local Bodies are the face of the governance for the public. E-governance can positively affect the public service delivery if and only if the Local Bodies are well equipped to deliver the eservice to the public.

At present, MoFALD is extensively supporting the Local e-Governance. There are Engineers working as ICTVs in 75 DDC and 58 old municipalities under LGCDP-II program of MoFALD. This group of technical personnel is there to support the all ICT activities of the DDCs and Municipalities and help LB adapt to new technology changes, plan those technology changes as well.

MoFALD/LGCDP provides the systems, procedures, structures, tools and capacities for facilitating the transformation of local bodes into local governance entities. MoFALD set up a new pilot initiative, "University ICT Volunteers" for LGCDP phase-II. This component aims to digitize the working procedure of governance of Nepal as well as strengthen the IT infrastructure of LBs (DDCs/Municipalities/VDCs).

Under this initiation, total 136 Volunteers are placed as 'ICT Volunteers (IT Engineers) ' in each 75 District Development committees (DDCs), 58 Municipalities, in the Ministry (MoFALD0) initially for 2 years. Furthermore, ICT Experts in each 6 Regional Coordination Unit & 2 program coordinators and program coordination Unit (MoFALD).

This effort of ministry help to digitizing the working procedure of government of Nepal. The detail study of 2 LBs (selected VDC of kailali Pawera & Chaumala) very helpful and useful for setup of basic IT services at government office and improve service delivery mechanism. This research useful for future e-government process of Nepal.

2.4 Technology used for Public Service Delivery

Web Portals

A Web portal is most often one specially designed Web site that brings information together from diverse sources in a uniform way. Its best way of public information dissemination and used for information gathering. Nepal also use government web portal for this propose. At local level local bodes are also stated to standard uniformity of website for public informant dissemination. DDC and municipalities of

Nepal stated to adapt of website. Future it is possible for rural municipalities for information sharing platform for public.

Social Medias

Social Media in recent times has become synonymous with Social Networking sites such as Facebook or Microblogging sites such as Twitter. However, very broadly social media can be defined as any web or mobile based platform that enables an individual or agency to communicate interactively and enables exchange of user generated content. Social media can be used for public information decimation, grievance handling, and feedback collection. It's mostly used tool for public connectivity.

Digital Notice Board

Electronic or Digital notice boards can be used in a side variety of application for communicating information to people in quicker and more cost effective manner than traditional paper, wall panting and poster notice board . In Nepal some of LBs (DDC and Municipalities) use digital notice board for public inducing digital citizen chatter and updated information. Future it would be suitable for VDC level for public information sharing plate form.

Audio Notice Board

Audio Notice Board Service is a Value Added system Service based on intelligent network platform. It is a supplementary service of PSTN VMS (Voice Mailbox Service) in which the mailbox can be used as a Notice Board by the subscriber. The subscriber can record their notice board material or information in their telephone (subscribed for Audio Notice Board Service facility) so that when a person calls that telephone number, the recorded notices or information is played. The recorded notices/information can be edited or deleted as required by the subscriber. Local Bodes (DDC/VDC and Municipalities) use audio notice board to updated information that is useful for public related. It is very useful form LBs to public relay the important information. It is useful for LBs to use to call word citizenship forum (WCF), Community Awareness Center meeting and to mobilization of social mobilizer.

Group/Bulk SMS

Bulk SMS messaging is a legacy description for application-to-person SMS messaging services. It refers specifically to the sending of large number of SMS messages to the mobile phones of a predetermined group of recipients. It is very useful for local bodes for information dissemination, collection information, emergency response for the public.

Management Information System (MIS)

Management Information Systems (MIS) is the study of people, technology, and organizations. A management information system (MIS) focuses on the management of information systems to provide efficiency and effectiveness of strategic decision making. The concept may include systems termed transaction processing system, decision support system, expert system, or executive information system. The term is often used in the academic study of businesses and has connections with other areas, such as information systems, information technology, and informatics, e-commerce and computer science; as a result, the term is used interchangeably with some of these areas. In Nepal MIS used by Department of Civil Registration (DOCR:http://docr.gov.np) for vital event registration (Birth, Marriage, Divorce, migration and death) and social security distribution. The main aim of MIS to integrate the national database and used for future in national identity. It is completely online system and currently pilot and implemented by some LBs (DDC/VDCs and municipalities) in Nepal. In this case study seceded 2 VDC (Pawera & Chaumala) which implement MIS system for effective and transparent public service delivery. Conceptual connectivity of MIS is given:

2.5 Scope of ICT and E-Governance

E-Governance is the use of information and communication technologies to support good governance. It has the following main dimensions:

2.5.1 Government to Citizen (G2C)

G2C will aim at connecting citizens to government by talking to citizens and supporting accountability, by listening to citizens and supporting democracy, and by

improving public services. It will involve better services to the citizens through single point delivery mechanism and will involve areas like:

E-Citizen

Under e-citizen integrated service centres will be created. The purpose of these centres will be to take over the various customer services in due course. It will offer services like issue of Certificates, national identity card, Passports, Payment of Bills and taxes etc. These centres will become one-stop Government Shops for delivery of all services.

E-Transport

The transport aspects that can be easily e-governed include: Registration of motor vehicles, Issue of driving licenses, Issue of plying permissions (Permits), Tax and fee collection through Cash and Bank Chillan and Control of Pollution.

E-Medicine

It will involve linking of various hospitals in different parts of the country and provide better medical services to the citizen.

E-Education

E-Education will constitute various initiatives of educating the citizen and the Government with the various Information technologies

E-Registration

E-Governing the registration and transfer of the properties and stamp duty to be paid thereon will bring substantial reduction of paper work and reduce the duplicating of entries. Further the transparency in work will increase and the overall time of process registration will reduce.

2.5.2 Citizen to Government (C2G)

C2G will mainly constitute the areas where the citizen interacts with the Government. It will include areas like election when citizens vote for the Government; Census where he provides information about himself to the Government; taxation where he is paying taxes to the Government.

E-Democracy

The e-democracy is an effort to change the role of citizen from passive information giving to active citizen involvement. In an e-democracy the Government will be informing the citizen, representing the citizen, and encouraging the citizen to vote, consulting the citizen and engaging the citizen in the Governance. Taking the citizens input about the various government policies by organizing an e-debate will further strengthen the e-democracy. The concept of e-debate is similar to chat over the Internet, wherein not only the citizens but also the political leaders contesting the elections participate. The citizens give their feedback about the various policies of the parties and particularly the manifesto of the party. The initiative will further strengthen the process by enhancing the representative role, improving accessibility of citizens to their elected members and developing the capacity of elected representatives to engage in e-government. Elected members will also be provided with access to the local authority's Intranet and e-mail systems so that they become available online for decision making and people can easily access them.

2.5.3 Government to Government (G2G)

This can also be referred as *e-Administration.* It involves improving government processes by cutting costs, by managing performance, by making strategic connections within government, and by creating empowerment. It will involve networking all Government offices so as to produce synergy among them. The major areas are:

E-Secretariat

Secretariat which is the seat of power has a lot of valuable information regarding the functioning of the State. The cross-linking of various departments and exchange of information amongst various components will simplify the process of Governance.

E-Police

E-Police will help to build citizen confidence. There will be two databases. One of police personnel and the other of criminals. The database of personnel will have the records of their current and previous postings.

E-Court

IT can transform the system and bring in the court cases to a level of zero dependency. Creating a database of cases can do the same. In fact such a system will help to avoid all the appeals to High Courts and Supreme Court, for the Judges can consider the appeals from an intranet wherein the case remains in the same district court but the Higher Court gives their decision online based on the recorded facts of the case.

2.5.4 Government to Business (G2B)

Taxation

This will constitute the various services a business house needs to get from the Government, which includes getting licenses etc. In a similar scenario, it can also flow from a business house to the Government as in the case of procurements, from such business houses by the Government. This will become a B2G service.

2.5.5 Government to NGO (G2N)

E-Society

Building interactions beyond the boundaries of government by developing communities, by building government partnerships, and by building civil society. It will involve building various associations or interest groups that will ensure the

betterment of the society. Such initiatives deal particularly with the relationship between government and citizens: either as voters/stakeholders from whom the public sector derives its legitimacy, or as customers who consume public services

(Adapted from: White Paper on E-Governance Strategy
http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan014672.pdf)

CHAPTER III
RESEARCH METHODOLOGY

This chapter includes research design, rationale of the selection of study area, sampling procedure and sample size, sources of data collection, data collection tools and techniques.

3.1 Research Design

This study is carried out on the basis of descriptive research design because the study was focused on to investigate the role of ICT in local effective public service delivery of local bodies. Moreover the objective of the study was to find out the effectiveness of ICT in local bodies and communities, use of ICT daily life style of public and relation between local governments. In this regard, it is an exploratory research. Besides, the study attempts to describe the role of ICT on service delivery, agriculture, health, education etc. on the basis of local people's perception and explored findings is described. Thus, this is both descriptive and exploratory.

3.2 Sources of Data Collection

The primary data were collected from interview survey. Secondary data were also studied, acquired from different reports, published and unpublished documents, presentations, from individuals, experts and organizations related to Information Technology (IT) and related websites.

3.3 Rationale of the Selection of Study Area

This is century of Information and Communication Technology (ICT). Wider range of IT tool and technology for easy life style. On this context, MoFALD is extensively supporting the Local e-Governance. There are Engineers working as ICTVs in 75 DDC and 58 old municipalities under LGCDP-II program of MoFALD. This group of technical personnel is there to support the all ICT activities of the LBs (DDCs /VDCs and Municipalities) help LB adapt to new technology changes, plan those technology changes as well.

MoFALD/LGCDP provides the systems, procedures, structures, tools and capacities for facilitating the transformation of local bodes into local governance entities. MoFALD set up a new pilot initiative, "University ICT Volunteers" for LGCDP phase-II. This component aims to digitize the working procedure of governance of Nepal as well as strengthen the IT infrastructure of LBs (DDCs/Municipalities/VDCs).

This effort of ministry help to digitizing the working procedure of government of Nepal. The detail study of 2 LBs (selected VDCs of kailali Pawera & Chaumala) very helpful and useful for overall output positive impact, challenge and future feedback and recommendation. This research useful for future implementation of e-government process in Nepal.

3.4 Sampling Size and Sampling Procedure

The beneficiary's public form Pawera and Chaumala were potential respondents of the study. The potential sampling public were 25/26 form each VDCs. Sampling public are those who were benefited from VDC darning taking service. The total number of house hold in Pawera VDC is 980 and total population is 5835 and total number of house hold in Chaumala 5293 VDC is 980 and total population is 27586. Total number of household and total population taken form population censes report 2011. After use of MIS system also take interview form 2/2 VDC officials for interviews survey for effectiveness and satisfaction of public service after implementation of MIS/ICT tool.

3.5 Data Collection Techniques and Tools

The study used questionnaire, interview and key informant. Primary information was acquired through filling questionnaires. Interview to key informants was another method adopted for the study. Secondary data were acquired from different reports, documents and related websites.

3.5.1 Interview Survey

Structured questionnaires were prepared to generate primary data from the study area. The researcher requested to fill the questionnaire to the respective respondents. The

respondents who were unable to fill up questionnaire, the questions were asked to the respondents and answers were filled up to collect the required data by the researcher.

3.5.2 Key Informants Interview

The primary data also were collected from key informants (computer operator and VDC security) using the direct or indirect interview method. The interview is taken as cross reference (checking) for the data obtained from the questionnaire. The informants were interviewed on the role of computer based system/ICT, manual based Vs computer based MIS system for vital event registration and social security distribution and overall impact on income level. Respondents were also chosen by the help of key informants.

3.6 Data Tabulation and Analysis

Data will be presented in various units and forms depending on its nature to conduct through analysis on it to fulfil the set objectives. Primary data will be collected through questionnaire, interview, and key information. Similarly secondary data will be collected from various published and unpublished materials by related organizations. Publication source Publication of Central Beauro of statics, Ministry of Federal Affair and Local Development, UN Publication will be the major source of secondary data. The key information of data are collected form the study VDC & respected public to check the effective use of ICT for public service delivery. Secondary data collection from various source based on filed study data collection.

A number of mathematical tools such as percentage, mean and other geographical presentation will be employed as analytical tools. The data and information will also be presented in table, pie chart, bar diagram etc. Also other publication, reports and studies performed by various organization and related which are very supportive for the study will be revised in details.

CHAPTER - IV
INTRODUCTION OF THE STUDY AREA

This chapter includes the introduction of study area, geographical, demographical, political introduction of Pawera and Chaumala VDCs and kailali district.

4.1 Background

The district, with Dhangadhi as its district headquarters, covers an area of 3,235 square kilometres (1,249 sq mi) and has a population (2001) of 616,697 and (2011) of 775,709. Dhangadhi is a Center of attraction of not only Kailali district but of the whole Seti zone. The district also contains Tikapur Park, one of the biggest parks in Nepal, and Godha-Ghodi Tal (lake) located at Sukhad Kailali. An aircraft museum was established in Dhangadhi by Pilot Bed Upreti in 2014 which is the only museum of its kind in the Country. In kailali district currently one Sub-Metropolitan City (Dhangadhi) and 5 municipalities: Attriya, Tikapur, Lamkichuha, Ghodaghodi and Bhajani- Trishkti. Total number of VDC are 28 in kailali district. Out of 28 VDCs Pawera and Chaumala research of the study.

Pawera is a village development committee in Kailali District in the Seti Zone of western Nepal. At the time of the 2011 Nepal census it had a population of 5835 living in 980 individual households.

Chaumala is a village development committee in Kailali District in the Seti Zone of western Nepal, near the town of Dhangadhi. At the time of the 2011 Nepal census it had a population of 27586 living in 5393 individual households. Chaumala is exactly located 32 km. east from the primary city and municipality of Kailali district, Dhangadhi and almost 60 km. west from another municipality, Tikapur. It lies across the Mahendra Highway, of Nepal. It has two small markets, one across the highway itself and other beyond the river.

The village has almost all sort of basic facilities, i.e. education, health, transportation, communication and electricity. There are 9 villages within this VDC; Rajipur, Chaumala, Udashi, Jhil, Mangalpur, Khurkhuriya, Maghi, Banbehada and Kuchaini respectively.

4.2 Agriculture

More than 80 percent of the Nepal's population is dependent on agriculture. Traditional, subsistence agriculture is pre-dominant in Nepal. More than 80 percent people depended on agriculture and livestock in the study area. Rice, maize, millet are major crops in study area. Kodo, Amriso, mustard are cash crops of the study area. Ghaiya dhal (Rice spps.) is one of the most important endemic crops found in this study area. Traditional system of cultivation, mono crops cultivation and subsistence farming are agricultural characteristics. So the economy is dependent on agrarian activities.

4.3 Natural Resources

The Far-Western Development Region is one of Nepal's five development regions. It is located at the western end of the country and has its headquarters in Dipayal.

The Far-Western Region covers 19,539 square kilometers. It has nine districts with the regional headquarters at Dipayal, Doti District. The Far-Western Region is remote and developmentally challenged. Some 44% of people in the Far West Hills and 49% in the Himalayan districts live below the poverty line. The region has limited basic services. The difficult topography complicates development. The region has complex socio-economic structures along with widespread gender- and caste-based discrimination. Traditional systems associated with religion, culture and customs have limited overall development.

Kailali district is situated in far western region of Nepal in Seti Zone. The district was returned to Nepal from East India Company in 1860 AD. Hansuliya VDC in Kailali is a village where a fort was located between 1968 and 1978.

Most part of the district lies in Tarai belt with varying the altitude ranging from 179 m to 1,957 m above sea level. Dhangadhi is the headquarters of the district as well. The rectangular-shaped district covers an area of 2,742 sq. km. Most people are Tharus. Agronomy is the base of economy, where Karnali, Mohana, Patheraiya, Kada Kamara, Surmi Rivers provides water for cultivation of the land. Dhangadhi is the

prime commercial hub. Dhangadhi-Dadeldhura Highway would become the backbone for the development of Kailali.

4.4 Demographic Scenario

The district of Kailali lies in the Seti zone of the Far-Western Development Region, some 650 kilometres west of Kathmandu. Main part of the district lies in the Terai belt with mainly tropical climate but in the higher regions also subtropical climate conditions can be found. Most of the inhabitants are Tharus. Agronomy is the base of economy, and rivers like Karnali, Mohana, Patheraiya, Kada Kamara, Surmi provide water for cultivation of the land. Kailali has more than 100 lakes and ponds, including Ghodaghodi Tal, the largest lake in Terai. The district also contains Tikapur Brihat Park, one of the biggest parks in Nepal.

Table 1: Population Demographic Scenario of Research VDCs

VDCs	Household	Total	Male	Female
Chaumala	5,293	27,586	12,729	14,857
Pawera	980	5,835	2,813	3,022
TOTAL	6,273	33,421	15,542	17,879

(Source: CBS report 2011)

CHAPTER – V

ROLE OF INFORMATION TECHNOLOGY AND PUBLIC SERVICE DELIVERY

An administrative body for a small geographic area, such as a city, town, county, or state. A local government will typically only have control over their specific geographical region, and cannot pass or enforce laws that will affect a wider area. Local governments can elect officials, enact taxes, and do many other things that a national government would do, just on a smaller scale.

Nepal is divided, administratively, into 75 districts and 3157 VDCs, and 217 municipalities. VDCs and municipalities are the lower administrative units in the district. Each VDC is comprised of nine wards and wards in municipality range from 9 to 35 depending upon the size of population. Institutions working at the lowest level of administrative mechanism of the government are VDCs and municipalities. A District Council works as a parliament in the district. It is composed of a chairperson and a deputy-chairperson of each VDC in the district, mayor and deputy-mayor of each municipality in the district, members of the DDC, members of the House of Representatives and the National Assembly within the district, and six persons nominated by the District Council. The functions, duties and authority of the district council are as follows.

- To pass the budgets, plans and program submitted by the DDC.
- To evaluate the development programs in operation by the DDC
- To make discussion on the audit report of the DDC
- To approve the by-laws of the DDC
- To delegate some of the authorities conferred on it to the DDC.

Being members in a District Council, the chairperson and deputy chairperson of the VDC could acquire information relating to the development activities of the DDC on one hand and on the other, the development plan of the VDC would come to the knowledge of the Council members. It is a kind of a forum for effective interaction between the Council members.

To keep data, records and to manage administrative works, there is one village secretary. The position is appointed by the government permanently, from whom they receive a salary. The ward members, ward chief, and VDC chiefs are not paid a salary, but they obtain money according to presence. VDC is guided from the district development committee, headquarters, and the chief of DDC is a local development officer.

VDC is lowest unit of government of Nepal. People are directly connect and get service form the VDC. Thus from perspective form the public delivery VDC delivers to the public based on public need make rural infrastructure. Rural infrastructure includes rode, bridge, education, health etc.

VDC also provides the vital event registration and social security distribution to public. The study aim to online MIS for effective service delivery for people timely and transparent way.

5.1 Problem and Prospect of Use of ICT in Local Bodies

To identify the status of use of ICT tools and technology that shows problems and prospective of ICT status of study VDCs. Collected key information from the VDC officials. Following data found:

Table 2: Basic IT status of Study VDCs

ICT status	Pawera	Chaumala
Number of computer laptop used in office	4	3
Used in official use	1	1
Total working staff	7	6
Staff working with computer	2	1
Internet connectivity	Yes	Yes
Update office website	No	No
Update MIS data	Yes	Yes

(Source: Filed survey 2016)

Data above shows that VDC level there was very poor level of ICT infrastructure with minimum level of IT knowledge. How every VDC officials try to deliver service through computer based. To find out the details service delivery mechanism. Detail study of VERS/MIS which was complete online based service for public for selected VDCs.

Vital event registration is priority one programme of government of Nepal. It is directly related day to day public life. Thus vital event registration process is the basic work of government of Nepal. At VDC is lowest government unit of Nepal. VDC directly serve to public on the area of vital event registration and social security system. Service delivery includes:

- Vital events registration system :

i) Birth,
ii) Death,
iii) Marriage,
iv) Divorce and
v) Migration.

- The operation of social transfer schemes:

(Elderly pension, single women, disability and ethnic minority supports and dietary benefits for children of Karnali zone and Dalit community, etc.) Delivered through VDC.

The research aim to study the traditional system to these basic service delivery and different development process at rural areas of selected VDCs. After finding of traditional system compared to computerized system.

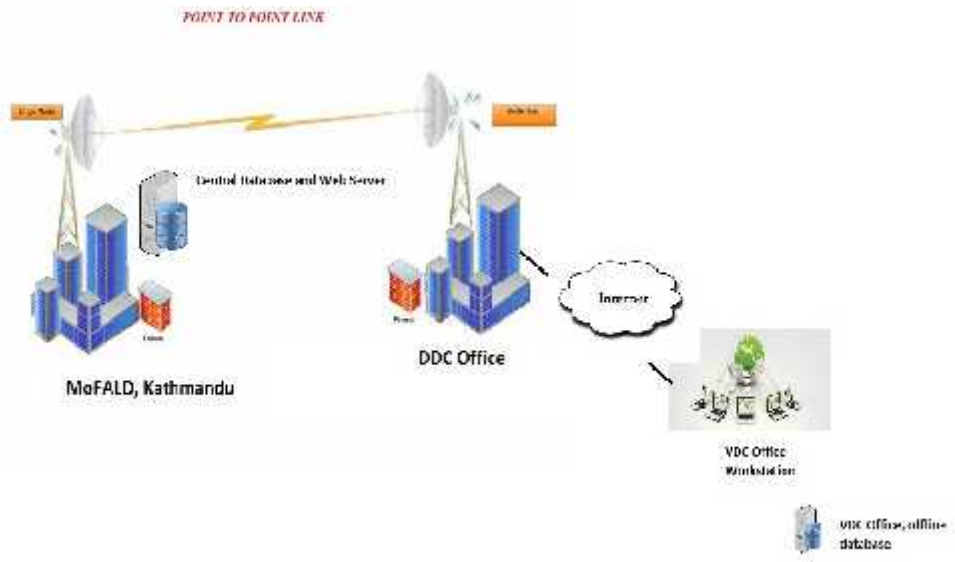
5.1.1 ICT Public Service Delivery Statas and Public Beneficiaries

Local bides directly serve to the public daily in daily life. Service delivery mechanism of local bodes are traditional beneficent mouths. The given below data are collected form the DDC kailali. These data represent that peoples are directly connected to LBs for basic service. Data collected from the DDC kailali and annual report of DOCR for

compression of public relation and service delivery of LBs.Online Vital Event Registration and Social Security (VER-SS)/MIS

Before using MIS there traditional file system for vital event registrations and social security distribution which is very difficult manage at VDC. In case of social security distribution three is repetitive and fraud beneficiaries. Use ICT is only the solution of these difficulties. Management information system, or MIS, broadly refers to a computer-based system that provides managers with the tools to organize, evaluate and efficiently manage departments within an organization. In order to provide past, present and prediction information, a management information system can include software that helps in decision making, data resources such as databases, the hardware resources of a system, decision support systems, people management and project management applications, and any computerized processes that enable the department to run efficiently). Use of information and communication technology used Pawera and Chaumala VDC for public delivery for transparency and time service to the people. Current working computer based service delivery mechanism given below:

Figure 5: Management Information System



(source: docr.gov.np)

Future of online VERSS/MIS:

- Graphical Report(s)
- Report(s)- Easy Export to Excel and PDF Format
- User Friendly Interface – Easy to Search
- Vital Event / Social Security Beneficiary Certificate Generation
- Social Security Allowance Budget forecasting
- Member Document (s) – Birth Certificate, Citizenship Card, Voters Card
- Family Folder – Details of Family Member
- Audit Trail – Keeps history of users activities
- High Security maintained – User Role defined
- Payment – Keeps information of payment to beneficiary
- Setup – User interactive and Ease Access

Current online vital event registration and Social security distribution (MIS) designed for all LBs. currently these system are pilot and tested some selected LBs. kailali district is one of which. The research main famous before and after implementation MIS service delivery of VDC. In kailali district 6 municipalities completely implemented MIS VERSE for vital event registration which is very efficient and well method. Municipality's level there is coverage of banking service so municipalities provided beneficiaries list form MIS and distributed through the bank. The research attempted whether it is applicable and suitable for VDC. For the take key informant form VDC officials and designed few questionnaire form them and collect the formation. After implementation of online MIS system it very easy for office work, record keeping and serve for the public. Public are now getting service form computerized system.

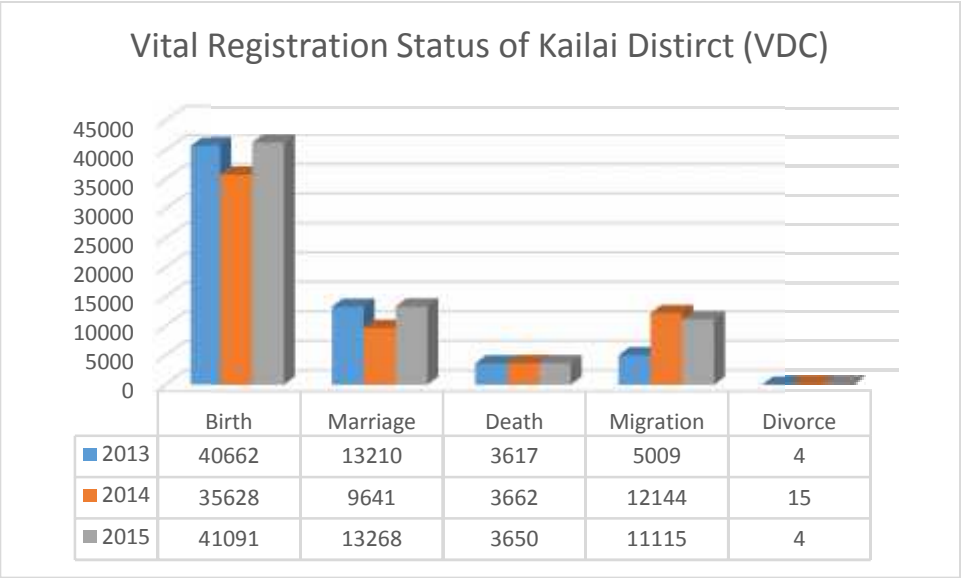
Table 3: Vital Registration Status of Kailali District

SN	Event Registered	2014	2015	2015
1	Birth	40662	35628	41091
2	Marriage	13210	9641	13268
3	Death	3617	3662	3650
4	Migration	5009	12144	11115
5	Divorce	4	15	4
Total		64516	63105	71143

(Source DOCR and DDC Kailali)

Table show that nearly 8-12 percentage of public is directly related to get basic service form the LBs. However these are the basic and necessary services. These data and record must be unique and recorded for future use also. In field visit show that it is difficult to collect data and information from VDC level past year of service provided to the public. It seems that VDC use traditional file system for service delivery mechanism. Thus data are collected form VDC. The senior found same as VDC level. Local bodes are also responsible to public to build the infrastructure as their needs. Three different level of public planning, priority project, record of beneficiary's administrative and financial decision. These data and information are not found based on computer. If it would be computer based it very help for compression and future planning and development process. Also use for Sectoral agency and office for the version purpose.

Figure 6: Vital Event Registration Composition Chart of Kailali District



	Birth	Marriage	Death	Migration	Divorce
2013	40662	13210	3617	5009	4
2014	35628	9641	3662	12144	15
2015	41091	13268	3650	11115	4

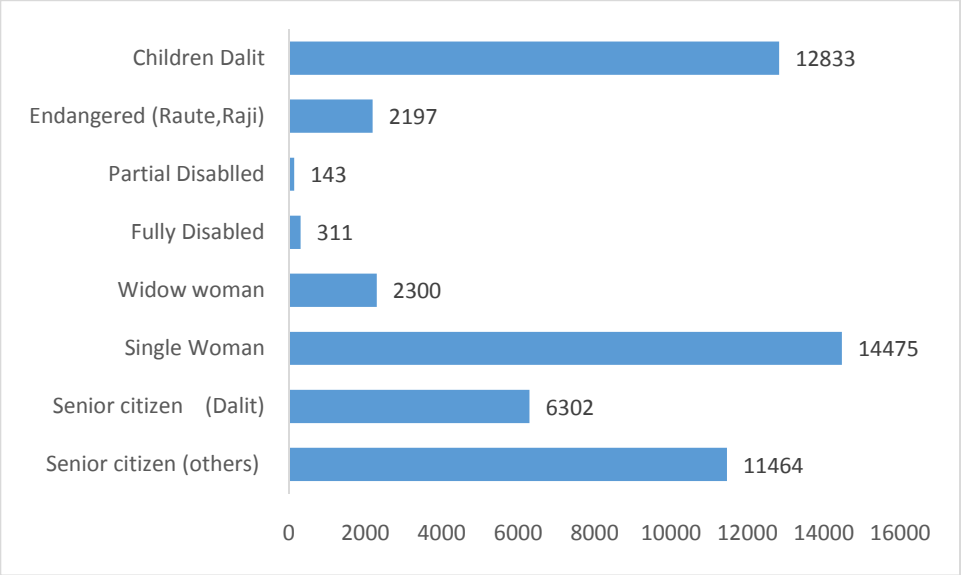
(Source DOCR and DDC Kailali)

Based on these difficulties depart of civil registration used online computer based vital event registration and social security distribution.

Social Security and Status and Public Beneficiaries:

Social security distribution is one of the major service delivery of local bodes. Figure show that nearly 11-14 percentage of total publication of directly benefited and getting service form the local bodes.

Figure 7: Social Security Beneficiaries of DDC Kailali FY 2014/15



(Source DDC Kailali)

These are basic service, it includes the reparative work each year. There is no accurate data found to companion for different. It's due to traditional service delivery mechanism and file system. It is directly related to finical transaction and basic service delivery of LBs which must slivered per year in Nepal event in remote VDC of Nepal. In this scenario here is need of computer based system for transparency and effective service delivery.

To find the status of traditional public delivery visited to Pawera and Chaumala VDC how server were delivery to public, need and importance computer based system designed some questionnaire for public for selected VDC and questionnaire for service providers. Collected questionnaire presented in different table and graphs for analysis. At public level questionnaire are collected form direct benefited public during receiving service at VDCs, some questionnaire answer were collected form ward citizen forum meeting and some are collected from poor and marginalized group community awareness Center. Total number of collected respondent were 26 form Pawera VDC and 25 from Chaumala VDC. Total number of survey respondent were51 public.

There was questionnaire format for service provider (VDC officials) collected some key informant for the status and effectiveness of public service delivery. Total number of participant official for the survey were 7 from both Pawera and Chaumala VDCs. Along with questionnaire taken interview and discussion about role of VDC officials to serve for public and role of modern Information Technology, which I include in conclusion and recommendation chapter.

Table 4: Age & Occupation of Public

Age Group	Number	Percentage
<20	4	7
21-35	19	38
36-50	17	34
51-65	8	16
>65	3	5
Total	51	100

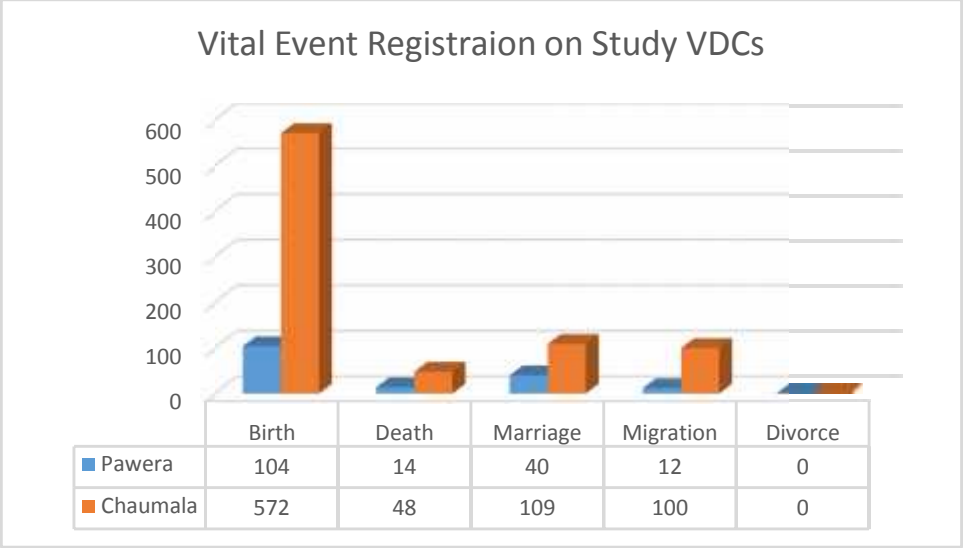
Occupation	Number	Percentage
Agriculture, Forest, Fish	36	70.7
Service, Business	5	10.2
Basic Occupation	3	5.6
Others	7	13.63
Total	51	100

(Field Survey 2016)

The largest number of respondents included in the survey were aged 21-35 includes 38 percentage then, aged group 36-65 35 percentage and smallest number of respondent included in the survey were aged less than twenty and grater sixty five which was 7 and 5 percentage respectively.

Similarly, in the angle of occupation of respondent maximum respondent were included the agriculture sector 70.7 percentage of total respondent. That means in Tarai areas of Nepal still most of people are farmer. Age group responded reposed shows that 21-50 population were awareness about public delivery system VDCs. In context of Nepal mobile coverage and penetration is very high and respondent of survey most of farmers. Mobile application ICT tool are very useful for service delivery.

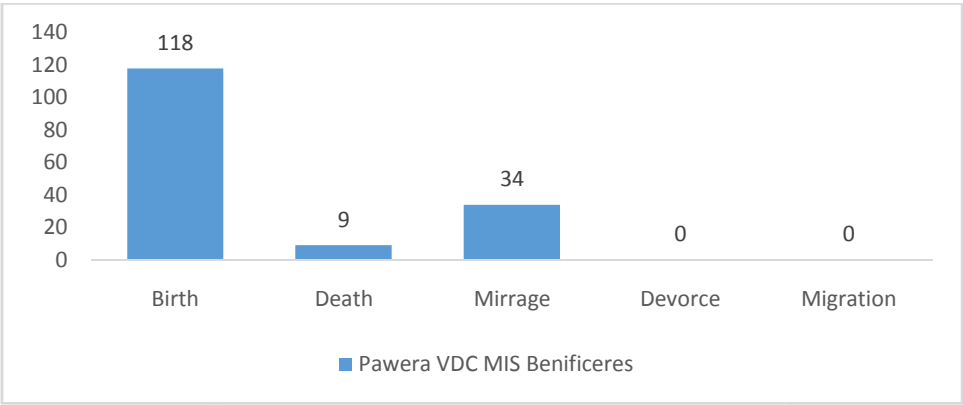
Figure 8: Vital Event Registration Status 2014/15



Source: DDC kailali

These data and information collected from DDC kailali form traditional computerized system it only included the beneficiaries list. DDC collected these data form file system form the VDCs. So its difficult to manage the number of years data. After use of online MIS we found detail of public beneficiaries when once entry on the system. Pawera VDC uses complete online MIS we can get data from the system one click as our need.

Figure 9: Vital Event Registration Beneficiaries form MIS



Source: Online MIS of Pawera VDC

Online vital registration and Social distribution now have detail related to benefited public.it is useful future used as national identity cared because it collected form VDC

level and stored in central database, different planning process of government of Nepal. Pawera have complete based on line system and Chaumala VDC just stared the system. Rest of 26 VDC of kailali district and VDC and municipalities of the Nepal are scope of this online MIS based service delivery.

After implementation of MIS based delivery VDC official following view was found. After designing of questionnaire for VDC officials 7 respond collected form Pawera and Chaumala. The collected responded view is very positive it is very easy to use and number of service delivery increase and also increase the public awareness.

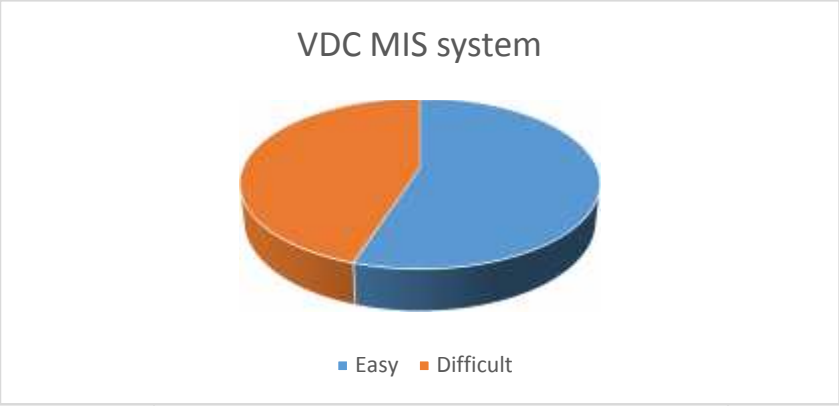
Table 5: VDC official View about online MIS

Status of Vital Event	Number	Percentage	Public Awareness	Number	Percentage
Increase rate	4	57	Increasing	5	71
Same rate	2	29	No increasing	2	29
Decreasing rate	1	14	Not in difference	0	
Don't' know	0	0	No idea	0	

Source: Filed survey 2016

MoFALD/LGCDP provided basic in IT infrastructure (computer, internet connectivity and Printer and solar back system) FY 2014/15 all VDC of kailali for effective service delivery. Also provide training to VDC and municipalities officials of kailali district on online MIS.

Figure 10: VDC officials View about MIS of VDC



Source: Filed Survey 2016

After having these facilities some VDC of kailali started on line MIS system. The research only includes the detail of Pawera and Chaumala VDC. VDC official of these VDC are very happy to use this system for effective service delivery. The VDC official said that it easy for the office work. It save time, and provide service to public effective right way as public need and time.

After depth study of online based MIS it's very useful for official use for data integrity, transparency and future use. Form the public point of its easy fast way of service. Following are major use of ICT in local bodies:

- Official use for inter government official communications.
- Maintain computer based asset of office.
- Use computer based accounting software.
- ICT tools are used in public information decimation. (eg . website, social media).
- Web based public service delivery.

Problems of ICT based services in local bodies:

- Insufficient basic ICT infrastructure.
- Lack of skilled IT human resource.
- Public awareness about use of ICT tools and technology.
- Lack of proper guideline, rule and act about IT abased serve for public office.

5.2 Importance of ICT for E-governance

To find out the importance of ICT in perspective of public service delivery form VDC offices. E-governance service based on the use of IT. To find out the importance of ICT for e-governance first of all find out the mechanism of information dissemination and service delivery process.

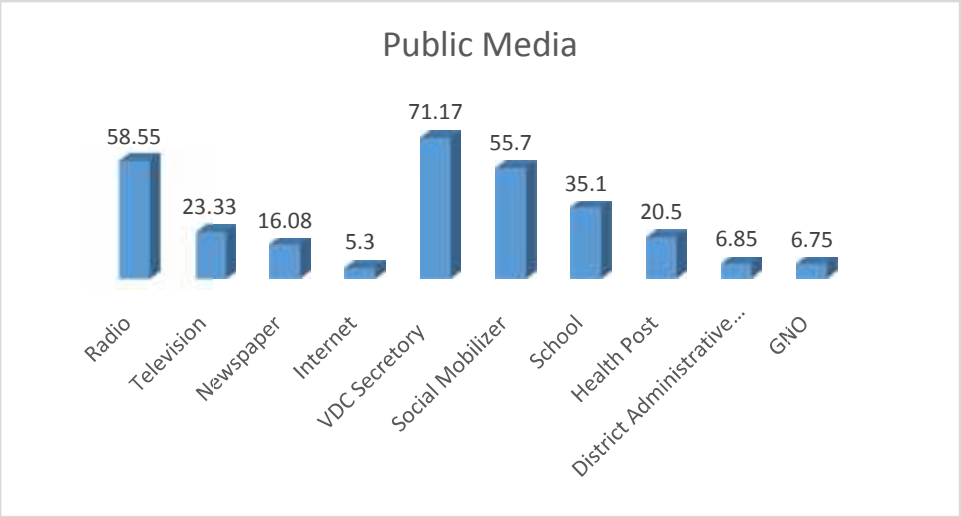
Table 6: Public Information Delivery Medium

Medium	Yes	Percentage	No	Percentage
Radio	30	58.55	21	41.45
Television	12	23.33	39	76.67
Newspaper	8	16.08	43	83.92
Internet	3	5.3	48	94.7
VDC Secretory	36	71.17	15	28.83
Social Mobilizer	28	55.7	23	44.3
School	18	35.1	33	64.9
Health Post	10	20.5	41	79.5
District Administrative Office	3	6.85	48	93.15
GNO	3	6.75	48	93.25

(Source: Field Survey 2016)

There was question in survey which medium public get information how to get information and where to go for basic services.

Figure 11: Public medium of information delivery for LBs Service Delivery



(Source: Field Survey 2016)

Information collected from the survey it is found that maximum public are dependable man than the modern medium. It found that VDC officials are the main person for public service delivery also found that local social mobilizer also very helpful person for the public. It is found that 71 percentages of information about vital event

registration and other service procedure process is given by VDC security. Radio, television and newspaper are also very useful medium for public information dissemination and awareness for service delivery. For example if VDC want to distribute social security in specific date can use Radio, television and newspaper information decimation. Survey show that internet coverage very low even in Trai district but it started helpful for future. The research VDCs have internet connection and uses online vital event registration and social distribution. It is very transparent and ICT based service delivery mechanism.

Table 7: Information about Place and official of Public view

Place	Number	Percentage	Registrar	Number	Percentage
VDC	45	89.1	VDC Secretory	43	84.5
Others	2	4	Others	4	8.2
Don't Know	4	6.9	Don't Know	4	7.3
Total	51	100	Total	51	100

(Source: Filed Survey 2016)

To know the public concept about service delivery related to VDC. Maxim population know about where and how provide the basic to every service. People had awareness about they know their service form the VDC officials. Thus here is need of capacity building and provide modern and IT based training to VDC officials for effective and transparent way of service delivery to people.

Table 8: Public View about VDC officials Behaviour

Attendance of VDC officials at office	Number	Percentage	Behaviour of VDC Officials	Number	Percentage
Always there in office	30	59.2	Very supportive	11	22
Find some time in office	17	33.4	Supportive	29	56
Don't find some times in office	3	5.9	Simple	10	20
Never find in office	1	1.5	Non supportive	1	2

Source: Field Survey 2016

The table show that presence of VDC official's maximum time at their office is positive. Most of the public mention that VDC official always office and supportive.

This mean that VDC officials are trusted person for the public. In new context Nepal is restructuring very soon. At rural municipalities word level need of VDC official.

Table 9: Use of Basic Services (Vital Event Registration)

Use of Vital Event Registration	Number	Percentage
To take social security	35	67.8
To take citizenship	45	88.4
To verify relationship	39	76.5
To go foreign country	28	54.4
To take benefit form family	33	64.7
To registered the school	41	81.1
Others	6	12.5

Source: Filed Survey 2016

Figure 12: Use of Vital Event Registration Certificate

Source: Filed Survey 2016

There was question related to detail in basic public and its use. Maximum respondent answer that it is used for to take citizenship for future 88.4 percentage, likewise to register the school 81.1, to verify relationship 76.5, to take social security 67.8 percentage. This means that its basic service taken form LBs but it is linkage to different sector for future. In the context of Nepal all these system are delivery by

manual and traditional basis. If its computerized based if any one service taken form LBs its automatically inform to other useful sector. Thus there is need of ICT based service delivery mechanism is very essential for furfures. For example LBs is delivering online computer based system if any public registered birth at VDC based on management information system if used future for citizenship, to register school and many more which automatically given by national database.

This is just study of basic service of public. There is large number of service provide by LBs even development sector also there is no data and information system found in LBs so need of information technology. If we want know before 20 year ago data and information in any LBs problem getting such information. If we use IT and computer base system we have easy and effective way of managing information in every die-mention.

Table 10: Method to improve the service delivery of LBs

Improve Methods	Priority				Priority Not given
	1	2	3	4	
Registered in ward level	10 (77%)	2	0	0	1
Use computer based system regular	2	6 (46%)	1	1	3
To increased punishment	0	2	3	5 (42%)	2
To provide training to registrar officials	1	2	4 (33%)	2	3

Source: Field survey 2016

Finally there was question relation to improve the existing system of vital event registration and social distribution which basic service of public. To know the scenario for the respondent person had given to priority for better service delivery as your need. Form the given 4 priority public want to get their service their own ward level. Next public want to their services with computer based system right time and right manner. In overall rural areas of Nepal there is computer and internet literacy and coverage is very low but public are very aware about computer based system. Public want to their serve form effective, efficient and timely form local bodes.

5.3 Role of ICT for effective Service Delivery

As ICT initiatives are undertaken to increase the administrative efficiency which thereby ensure better delivery of services to the public, thus effectiveness of services in this study was defined in terms of better service provision. Better service provision can be shown by the administrative efficiency due to use of electronic services which can be indicated by quality of eservices. The indicators for quality of services are many, some of which are in terms of time effectiveness, cost effectiveness, transparency, and accessibility of the services. However, the study has only considered timely delivery of services as the indicator of improved service delivery.

5.3.1 Time Factor

One of the main motives of providing services electronically is to make the services more time effective, meaning that e-services should help in saving time to get the services. To see, how effective e-services are in terms of time factor, service seekers were asked to provide their opinions giving scale such as strongly agree to strongly disagree (1-5) five point Likert Scale Format.

Table 11 : Time Effectiveness of E-services

Effectiveness of eservices – Time factor		Scale of ranking from 1 to 5 (in percentage)					Mean
		Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree	
Service seeker total of both VDCs	Save time	27	17	1	3	2	1.72
	Reduce cost of getting services	15	22	4	6	3	2.2
	Visit to office reduced	11	28	2	7	2	2.22
	Fair procedure	0	0	0	0	0	2.20
	Reduce personal favour	10	28	5	6	1	2.24
Service provider	Ease work	6	2	2	1		1.55
	Work more	2	8	1			1.44

(Source: Field Survey, 2016)

Note: Round up figures are presented.

For the ease of analysis, if strongly agree and agree are merged, then it shows that majority of service seekers respondents (88%) agreed that services have helped to save time. More than 70% of the respondents (service seekers) agreed that ICT based services have helped to reduce cost of getting services, decreased the visit to the office, ensured procedural fairness in the system and have helped to reduce personal favor while seeking services. Thus, according to the service seekers respondents a positive response towards the improvement in service delivery was found.

In addition, to understand the effectiveness of ICT based services from service provider's point of view, they were asked to rank their preferences on time factor. For ease of analysis, if strongly agree and agree are merged, then it shows that all the respondents agreed that services have helped to ease their working procedures, which means that ICT based services is very time effective. Overwhelming majority (96%) of the respondents agreed that because of services they can work more, meaning that the cost of doing the work has decreased. Ninety two percent of the respondents unanimously agreed that services have helped to decrease the customer crowd in the office.

5.3.2 Rating of ICT based Services

To understand the perception about effectiveness of ICT services, service seekers and providers both were asked to rate the services on the scale of very effective to very ineffective

Table 11: Rating of ICT Services

Respondents	Scale of rating from 1 to 5 (in percentage)				
	Very effective	Effective	Neutral	Ineffective	Very Ineffective
Service seekers	12	22	6	10	-
Service provider	3	4	2	-	-

(Source: Filed survey 2016)

Note: Round up figures are presented.

Scattered responses were found from the range of very effective to ineffective, though majority (70%) of the service seeker respondents viewed services to be effective. If the very effective and effective scaling is merged, then it can be found that the entire service provider viewed services to be effective. However, majority (89%) viewed e-services to be effective while 11 % viewed to be very effective. Unlike service seekers, for none of the service provider e-services was ineffective.

As majority of respondents (both service seekers and all the service providers) viewed ICT based services to be effective, so they were further asked to provide reasons for the effectiveness of e-services, and for that they were given a number of options and told to rank them as per their role in making e-services effective. It was found that both strata of respondents viewed.

Table 13: Ranking on Factors Influencing Effectiveness of ICT Services

Factors influencing effectiveness of services by		Ranking from highest to lowest in the order of 1 to 5
Service provider	Service seekers	
Web factor (accessible and updated)		1
ICT infrastructure	Essential services are provided electronically	2
Human resources	Public knowledge	3
Essential services are provided electronically	Customers demand	4
Attitude of service provider		5

(Source: Field survey 2016)

Some 10 percent of service seekers respondent viewed ICT based services was ineffective, so they were asked to identify the factors for making ineffective e-services. For this, they were give some options and asked to rank them as per their role. Dissatisfied customer for whom e-services are not effective pointed out the primary reason as because essential services are not provided electronically. They viewed unfavorable attitude of service provider as the second major reason for ineffective e-services. Inaccessible update of MIS , poor knowledge of Public, load

shedding problem, not updated website and lastly poor demand from customer were the third, fourth, fifth ranking factor for ineffective e-services.

5.3.3 Organizational Factors

Organization factor is the independent variable of the study. Organizational factors include four components, namely human resources, ICT related infrastructure, financial resources and attitude of service providers. This section has further elaborated the data findings in all the specified headings.

There are number of factors determining human resources of any organization, however the study had defined human resources in terms of two indicators: ICT personnel and capacity building training to employees. Though, there are different kinds of training provided to employees, the study has focused only on ICT related training. The status of ICT human recourse present in basic ICT status in problem and prospective of LBs. Training is thus one of the important factors for making any program effective of the employees. Human resources, in terms of ICT personnel with the organization, as the percentage of total government employees are found to be not more than 6 %, which means that government employees are not in good numbers with the organization. But given the fact that the organization has outsourced ICT personnel which can be increased or decreased as per the requirement of the day, it can be said that ICT personnel with the organization is sufficient.

Providing useful ICT related trainings, though the trainings provided by the organization are not sufficient. It can be inferred association between training with the effectiveness of ICT services.

5.3.4 Public Factor

Second independent variable of the study is customers factor shown by public knowledge and demand for e-services. This section has further elaborated the data findings in the above mentioned two categories. Public knowledge about e-services was understood in terms of their awareness about eservices, their reaction towards the publicity of e-services and their acquaintance with e-services. As the respondents (service seekers) were purposively chosen to meet the objectives of the study, it was

necessary to have respondents knowing about the presence of e-services facilities, and thus all the respondents (service seekers) of this study told that they are aware that the organization is providing services electronically to the customer.

Given the fact that all the respondents were aware about the presence of e-services, it is necessary to understand their response towards the advertisement made by the organization about the e-services provided. Thus, respondents were asked to provide their opinion about how well eservices are publicized, and data revealed that 54% responded agreed that e-services are well publicized. It should be noted that 44%, which is in minority but of significant percent of respondent, viewed that e-services are not well publicized.

Table 12: Publicity of ICT Services

Publicity (on the scale of 1 to 5)	Frequency	Percentage
Strongly agree	4	8
Agree	23	46
Neutral	1	2
Disagree	21	42
Strongly disagree	1	2
Total	50	100

(Source: Filed survey 2016)

Table 15: Accessibility and Effectiveness of ICT Services

E-services	Accessible e-services		Total
	Agree	Disagree	
Effective	29	8	37
Ineffective	5	8	14
Total	34	16	50

(Source: Filed survey 2016)

To understand how well public are acquaintance with the e-services, respondents were asked to define their acquaintance with the e-services. It was found that only 46% of the respondents have good acquaintance (very high as 16% and high as 26%) with the

e-services while 50 % have only moderate acquaintance and 4 % have low acquaintance with e-services. The survey revealed that all the components of organizational factor are associated to the effectiveness of e-services, while the components of public factor were not found to be associated with the effectiveness of e-services.

5.4 Recommendation Policy Measures for ICT in Study Areas

The study pointed out that the average response of service providers and seekers towards the IT based services as positive, nevertheless the degree of assertiveness differed, whereby unlike service providers, seekers viewed effectiveness in moderate manner. During the interaction and questionnaire survey with service seekers, the study had identified major area of their grievance.

They were, for example:

i). There is lack of advertisement/campaign to educate the public about the proper and effective use of ICT based services provided by the organization,
ii). Services like payment, vital event registration certificate and access to personal account are still not provided electronically.
iii). The information provided electronically is not sufficient. It means that the organizational website does not provide all the necessary information, for instance, when the organization started using e-services, how is it progressing, how to use it.
iv). E-services still could not be customer friendly, and because of that public need to be dependent.

The major areas of grievance of public have to be properly handled so as to ensure improved service delivery electronically. Of course, there has been increasing demand from customer for getting more e-services. The challenge is, thus, towards organization to meet the increasing demand of public and effectively deliver services electronically.

Different organization is set with distinct organizational set up. What is true for one organization might not go well with other organization. The findings of the study i.e.,

effective ICT-services and strong organizational aspect might not be the case of other governmental organization.

First, the research came up with the finding that public factors have not influenced the effectiveness of e-services with the organization. It would be interesting if future researches are devoted to assess the public role in effective e-service delivery.

Second, the research mainly focused on few organizational aspects, so it would be more interesting if future researches are carried out taking in consideration other organizational factors such as legal provisions, the role of outsourced human resources, political and administrative leadership.

Third, the effectiveness of e-services in the study was looked from improvement in service delivery which was again measured by time effectiveness of the e-services. However, other major objectives of e-governance like ensuring transparency, reducing corruption, reducing cost and quality of services, if studied in future research, then it would add more value to the effectiveness of e-services.

CHAPTER - VI
SUMMARY, CONCLUSION AND RECOMMENDATION

6.1 Summary

Individual event registration records, local bodies (District Development Committees, Municipalities, Village Development Committee), courtesy sealed to keep and modern communication technology, electronic means of recording secure way to keep and Information form computerized By keeping the certificate from the computer network through print and learned to be provided and individual event registration monthly and annual reports to provide a simple and intuitive earliest method. This individual event program and registration is concerned, as well as the coordination of social security programs which related to both of these schemes to integrate a way to support and delivery service to public. Problem traditional vital registration existing Act, the lack of regulation in full, clearly the law is not mentioned pointer, low manpower situation, lack of coordination among related government agencies, other activities of the program, no registration belong to priority.

Registration (Individual Event Registration) system to manage the state administrative record, to provide legal protection to the citizens and the state administrative, district administration office demographic and reliable, regular, system as an important means of production. All traditional problems are the solution of computerized MIS.

In this regard, information communication and technology (ICT) is seen as a tool to support the work of governmental institutions and agencies with the objectives of delivering public services and information in more convenient, citizen-centric and cost effective manner. In Nepal, the government has recognized the importance of ICT for making the service delivery prompt and effective and thus has introduced ICT in different public offices.

This study has explored the role of ICT in facilitating service delivery and service quality in the public sector. It has investigated the relationship between governance, service quality and public satisfaction. The results indicate that e-governance has the potential to improve service delivery and public satisfaction. It is also confirmed that the expectations of citizens from public services are quite high. At in context of Nepal

different local bodes uses the modern ICT technologies following are the intervention areas:

- Website development and update.
- Software development and data entry official use and transparency.
- ICT Training to local body staffs and at community level.
- Online reporting support.
- Social media platform creation and update.
- Group SMS for public information dissemination.
- Digital Notice Board for public at office for accurate procedure and method getting service.
- Audio Notice Board for public notice and information dissemination.
- Biometric Attendance for LBs officials for full time serve for public.
- Queue Management System effective way of public service delivery.
- Free Wi-Fi at DDC and Municipalities office for public.
- Mobile Application selected LBs and MOFALD information exchange.
- GIS map creation (Social, Political, resource & new municipality boundaries).

These ICT based service delivery mechanism are currently used by few district development committee and municipalities of Nepal. Future recommended and useful for rural village development. There are some challenge to implement these ICT based service to cover everywhere following are main issue and challenge:

- Connectivity of internet at VDC level.
- VDC and ward level of municipalities still there problem of back IT infrastructure.
- No practice heads of account budget allocation for ICT and e-government at LBs.
- Lack of ICT policy at Local Bodies.
- Lack of human resource/ technically skilled manpower.
- Resistance of LB staffs for ICT implementation and usage.
- LBs not talking ICT as a tool for service delivery. Only considering ICT for training purposes and the implementation.
- Non-standard & scattered software systems at LBs.

New ICT can offer real opportunities to improve the quality of community life. It is also important to deepen our level of reflection on community dynamics and on the constraints encountered when introducing and using ICT for development. A healthy information society is concerned with getting reliable and timely information to its members. Making people aware of the benefits derivable from the use of ICT will help to make the society a healthy one.

6.2 Conclusion

The government of Nepal views e-governance in terms of its potential for bringing about a major paradigm shift in the way public administration and service delivery functions and also as a potential means of augmenting basic tenets of good governance. E-Governance has been taken to break the barrier of geographical diversity by using ICTs which can help its effective and efficient transformation. In Nepal, various sectors such as education, health, agriculture, tourism, trade, among others have been using information technology. The number of telephone/internet users has been increasing significantly and legal and necessary infrastructures has been created.

The study has analysed the effectiveness of ICT based services in terms of improved service delivery from organizational and public point of view. Data analysis revealed that organizational factors (human resources, ICT infrastructure, financial resources and attitude of service providers) found to be associated to the effectiveness of services, while Public factors (public's demand and public knowledge) were not found to be associated with the effectiveness of ICT services. The findings of the study conclude the following points:

- Public factors with the effectiveness of ICT based services shows that public have a small role to play to make effective service delivery.
- This study supported that capable human resources influence the effectiveness of services, and this finding goes well with the Human Capital theory which advocates the role of trained and capable human resources for the better national productivity.
- As the study came with the finding that the organizational factor influence the effectiveness of e-services, so it sounds logical to assert that the role of

organizational

factors is significant for making e-services effective and if the organizational factors are more emphasized and strengthened.

- The study pointed out that the average response of service providers and seekers towards the ICT based service delivery as positive.

6.3 Recommendations

Different role of information and communication technology (ICT) have been study in site. Different good practice of ICT based service delivery implemented by LBs, study the issue and challenge for use of IT in rural areas of Nepal follows are recommendation:

6.3.1 Recommendations for Planning and Program Implementation

- Develop a long term (at least 5 years) ICT strategy has to be designed by MOFALD.
- The strategy will be designed as a subset of ICT Plan of government of Nepal.
- The strategy will be a guideline for all ICT activities for MOFALD and LBs

- All sections at MOFALD and LBs should follow the ICT strategy.
- Ministry to strictly follow up implementation of that strategy.
- Implement single unified robust system for activities of LBs and regular result based reporting.
    - Strengthen e-Governance framework.
    - Digitize office environment for online reporting.
    - Support software/ systems at regional level.
    - Support day to day governance activities for e-citizen services.
    - Support software/ systems at subnational level.
- Strengthen Information and e-Governance (I&EG) section
    - Undersecretary (ICT) be positioned in I&EG section.
    - I&EG section be sole responsible all ICT activities
    - Section be informed/ referred/ consulted in all ICT related issue.
- ICT awareness at central and local level.

❖ Development of centralised system for all software and system.

- All system (eg: software, server) must be integrated.
- For e.g. all the accounting software in the country inside government should be followed in single system which can be monitored, controlled and supported if needed by MoFALD, all Store software should be used uniformly, the vital registration system should be use in single system and should be interfaced with social security system and other public service system, etc.)

❖ Adequate resource for ICT at all levels.

6.3.2 Recommendations for Future Research

- More study need for developing a long term e-governance strategy for ministry and local level.
- Study and research how to increase ICT awareness for public at community level.
- Research on development of innovative ICT product and service delivery mechanism in the context of Nepal.

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Annex - 1

Questionnaires for Data Collection

Beneficiaries /Public who receive service form VDC

Namaste!

I am Durga Prasad Bhatta from Central Department of RD, TU, and Kathmandu. I am here to conduct a research on Assessment of the "*Role of Information and Communication Technology in Effective Service Delivery of Local Bides"* of Pawera and Chaumala VDC kailali district. For the purpose of the research, I am going to ask you some questions related to the research topic. So please help me providing the accurate information, so that I can incorporate the real facts in my report. Please feel free to provide information and I promise your identity will be kept secret.

Part A:

Introduction of Respondent

Name: Address:

Occupation: VDC:

Questionnaires

1. How many family members do you have in your family?

Name	
Age	
Sex	
Occupation	
Education (with Details)	
Total family member	

2. Please mention Literacy status of your family

Unable to read/write ……. Person Literate …….. Person

Up to Class 5 …… Person Up to Class 8 ……. Person

S.L.C or equivalent …… Person Intermediate and above ….. Person

3. Did you registered vital event if occurred in your family at VDC? If so please mention :

Vital Event	Registered(Yes/NO)	Registeredyear
Birth		
Marriage		
Migration		
Divorce		
Death		

4. Do you listen that VDC/Municipality registered the personal event? Yes/No.

   If yes please mention the media given below:

Radio (Yes/No)	Newspaper (Yes/No)	District administration office (Yes/No)
Television (Yes/No)	Social Mobilizer (Yes/No)	NGO(Yes/No)
VDC/Secretory (Yes/No)	School(Yes/No)	Others (Yes/No)
Internet (Yes/No)	Health post(Yes/No)	

5. How many days we must be register the vital event at VDC?

a. 35 days b. don't know

c. Other ……..

6. If we don't register the individual vital event, it punishment by government rule?

   a. yes b. no

c. others

7. Who and where we register the personal vital event?
   a. Who……./ don't know
   b. Where……../ don't know

8. Did you find present of VDC officials at their office when we register our vital event?

   a. Yes always there in office
   b. Find some time in office
   c. Don't find some times in office
   d. Never find in office

9. How do you find the behaviour of vital event registrar officer?

   a. Very supportive
   b. Supportive
   c. Simple
   d. Non supportive

10. How is responsible to inform the individual vital event to register the VDC?

    a. Family that vital event occurred
    b. VDC security
    c. Don't know

11. What is the use of vital event registered certificate? In which work we use it? Please tack the from given option:

To take social security	To take citizenship	To verify relationship
To go foreign country	To take benefit form family	To registered the school
Others		

12. What to do for easy method to register the vital event and social security distribution?(Note give priority 1, 2…)

Improvement method	**Give priority**
Registered in ward level	
Use computer based system regular	
To increased punishment	
To provide training to registrar officials	
others	

13. Did you receive any training/orientation about vital registration/MIS?

    a. Yes if mention……
    b. b. NO

14. Mention if you have any objection about service delivery form VDC?

    ……

Part B: General information

1. Age:
2. Gender:
3. Place of residence:
4. Occupation:
    a. Self employed___
    b. Employed ___
    c. Student ___
    d. Others ____

5. Education
    a. Illiterate ___
    b. Below secondary Level ___
    c. Secondary Level – Bachelor degree ___
    d. Higher Secondary Level ___
    e. Bachelor Degree or higher___

Part B: Specific Information

1. What is your purpose for visit at the office?
   ____

2. Are you aware about the electronic services provided by the organization? Yes _____ No _____

3. If yes, how did you get the information about the e-services?
    a. Family and friends ____
    b. Internet ____
    c. TV, radio, FM ____
    d. Print media ____
    e. In Land Revenue Department/Office staff ___
    f. Other, if any, please specify____

4. To what extent, do you think you are acquainted with the e-services provided by the organization?
   Very High__8__ High 13____ Uncertain ___2_ Moderate 25_____ Low 2____

5. To what extent, do you agree that there has been well publicity of e-services? Strongly agree ___Agree ___ Neutral____ Disagree ____ Strongly disagree ___
6. How can e-services be better advertized?
    a. TV, radio, FM ____
    b. Print media ____
    c. Internet _____
    d. Campaign ____

7. Please read the statements, and provide your opinions. Please tick mark (√) the box.

Statements	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
E-services have helped to save time from bureaucratic proceedings					
E-services have helped to reduce the cost of getting services.					
E-services have helped to ensure procedural fairness in the system.					
E-services have helped to reduce personal favor while seeking services.					
The physical visits to the MIS have decreased due to e-services.					
E-services are easily accessible.					

8. Please provide your opinion on the following statements with tick mark (√) in the box.

Service providers are	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Prompt and efficient.					
Public responsive.					
Friendlier to public.					
Easily accessible to public.					
Non discriminatory towards public.					

9. What are the e-services you are using?
    a. Personal vital event registration ___
    b. Information provided by website ____
    c. Other, if any, please specify ___

10. Please rank on the scale of 1 to 5 (whereby 1 = highest and 5 = lowest) the following e-services in terms of their effectiveness.
    a. Personal MIS___
    b. Information provided by website ____
    c. Other, if any, please specify _____

11. Have you visited the organization‟s website? Yes ___ No ___ Don‟t know ____

12. How often do you visit the website?
    Very Frequently ___ Frequently ___ Normally ___ Sometimes ____ Never ____

13. What is the purpose of visiting the website of the organization?
    a. e-Filing ___
    b. To get the relevant documents (Act/Rules/Regulations/Reports) ___
    c. Update with notices ____
    d. Other, if any, please specify___

14. Please express your opinion on the following statements with the tick mark (√) in the box.

Statements	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Website is useful.					
Website is regularly maintained and updated.					
No log-in problem while browsing the website					

15. To what extent do you think the present e-services are sufficient?
    Fully ___ Partly ___ Not at all ___

Thank You!

Annex - 1

Questionnaires for Data Collection

Service provider/VDC officials

Namaste!

I am Durga Prasad Bhatta from Central Department of RD, TU, and Kathmandu. I am here to conduct a research on Assessment of the "*Role of Information and Communication Technology in Effective Service Delivery of Local Bides"* of Pawera and Chaumala VDC kailali district. For the purpose of the research, I am going to ask you some questions related to the research topic. So please help me providing the accurate information, so that I can incorporate the real facts in my report. Please feel free to provide information and I promise your identity will be kept secret.

Introduction of Respondent

Name: Address:

Occupation: VDC:

Questionnaires

1. Did you find the increase the rate of vital event registration in compression past year?

Increase rate	Decreasing rate
Same rate	Don't' know

2. Do you have any experience to increase the public opinionawareness about the vital event registration?
   a. Increasing
   b. No increasing
   c. Not in difference
   d. No idea
3. What are the necessary subject the vital event must be resisted?
   a. Admission to school
   b. To take social society
   c. Benefited form government
   d. all
4. How you feel the present computerized vital event registration system?
   a. Easy
   b. Difficult

5. What do we need to improve and increase the vital event registration system? Please tick on given option:

a. Provide training to service provider	b. To make computer and online system	c. Registered where vital event occurred
d. Make hard rule and regulation	e. Birth certificate us used as national identity cared	f. if other please mention

6. Did you receive any training about vital event registration?
   a. Yes / Name of training……..
   b. No
7. Do you have sufficient computer skill? Did you work on the online vital event registration and social secret distribution?
   a. Yes I am working
   b. I don't work on it
   c. If training provided I will do
   d. I don't like to use of computer

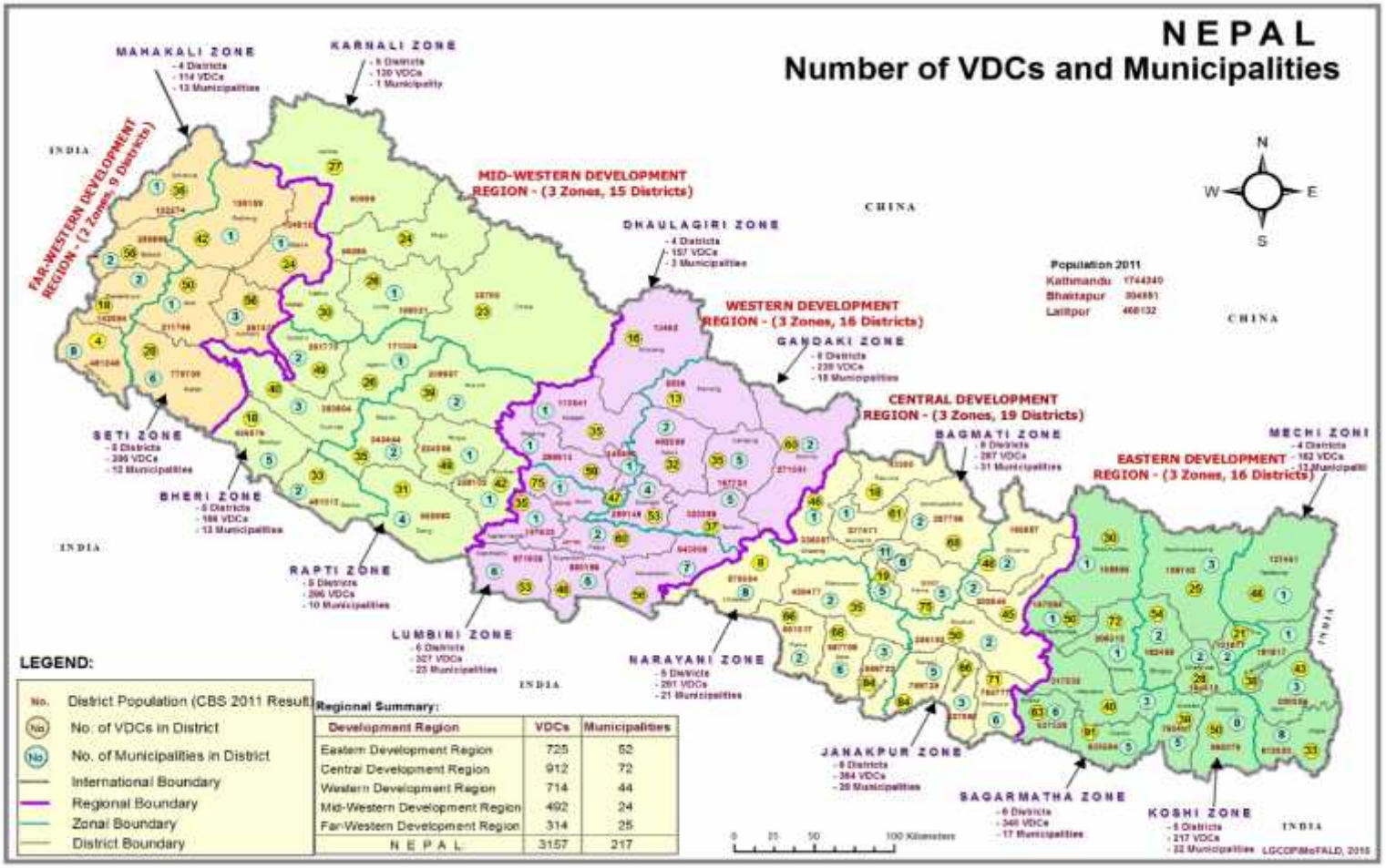
If you have any suggestion and feedback please……..

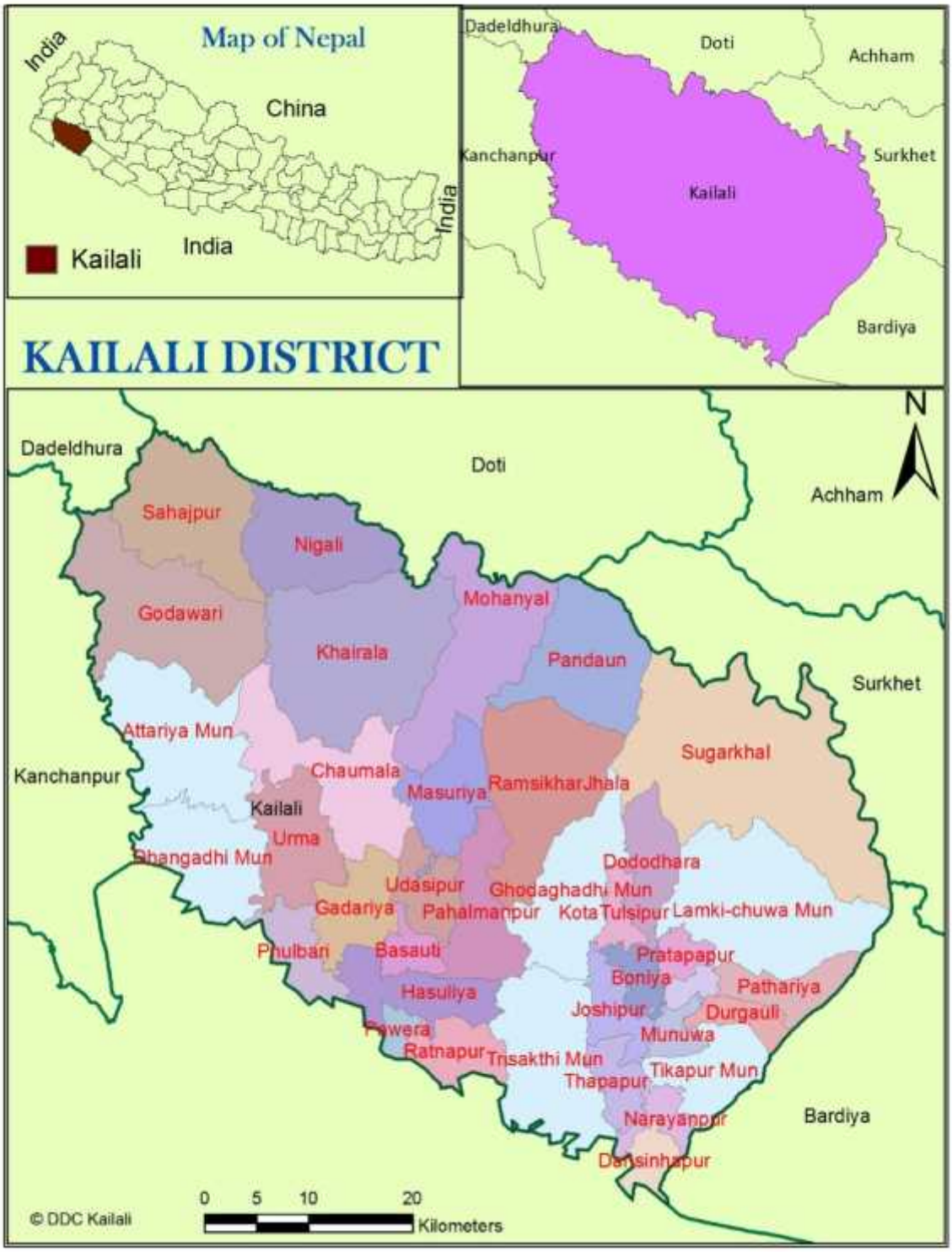
8. Effectiveness of eservices – Time factor:

Scale of ranking from 1 to 5 (in percentage)				
Strongly agree	Agree	Uncertain	Disagree	Strongly Disagree

Thank You!

Annex - 2: Map of Study Area




Map of Nepal
India
China
India
India
Kailali
Dadeldhura
Doti
Achham
Kanchanpur
Surkhet
Kailali
Bardiya
KAILALI DISTRICT
N
Dadeldhura
Doti
Achham
Sahajpur
Nigali
Godawari
Mohanyal
Khairala
Pandaun
Surkhet
Attariya Mun
Sugarkhal
Kanchanpur
Chaumala
Masuriya
RamsikharJhala
Kailali
Urma
Bhangadhi Mun
Dododhara
Udasipur
Ghodaghadhi Mun
Gadariya
Pahalmanpur
Kota Tulsipur
Lamki-chuwa Mun
Phulbari
Basauti
Pratapapur
Boniya
Pathariya
Hasuliya
Joshipur
Durgauli
Munuwa
Ratnapur
Tnsakthi Mun
Tikapur Mun
Thapapur
Narayanpur
Bardiya
Dansinhapur
0 5 10 20
Kilometers
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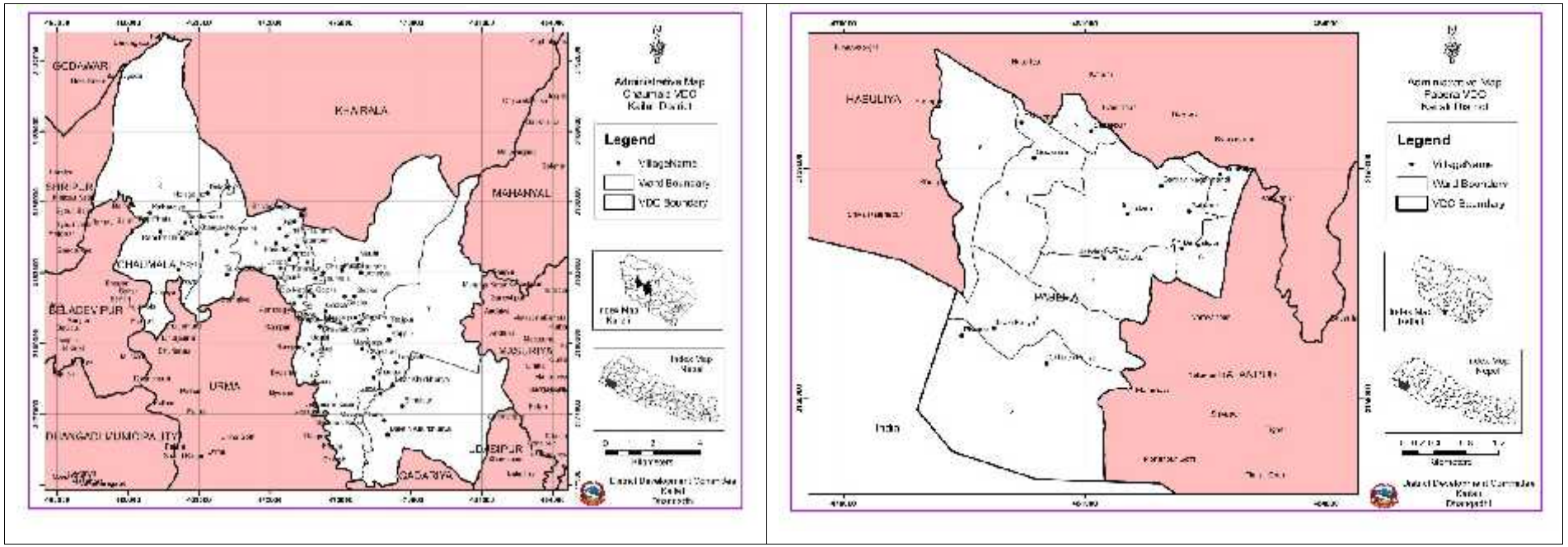

Research VDC (Chaumala and Pawera)

Annex 3: Photographs

Visited VDC officials at office to observed service delivery mechanism

Public were taking service form VDC

Traditional file based social security Distribution

Modern MIS service delivery/distribution of Social Security

Traditiaonal file based Vital evnt registraion, management and service delivery

Computreized MIS based vital event registraion and service delivery