

Original Research Article

Assessment of E Governance for National Development – A Case Study of Province 1 Nepal

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Article History

Received: 02.02.2021

Accepted: 12.05.2021

Published: 16.05.2021

Journal homepage:<https://www.easpublisher.com>**Quick Response Code**

Abstract: In the current era of information and communication technologies, it is impossible to have good government without e-government. Development of e-government in developing and least developed countries like Nepal have the potential to make better relationships between government and citizens. Recognizing the exact issues is significant so as to beat the inborn difficulties. This research tries to analyze the awareness of citizen towards the implementation of e-Government and its associated difficulties faced by province 1 government and its local bodies. From the primary data collected from questionnaire survey and content analysis the current status of e-based administrations conveyance activities in municipalities and hazardous difficulties in usage of e-based administration activities are being explored. Furthermore based on the findings of the data analysis, the study depicts some recommendations for the effective implementation of e-Government services in Province 1 Nepal.

Keywords: e-Government, Local Government, Challenges, Implementation, Province 1.

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BACKGROUND

E-government may be defined as a government framework applying and utilizing the internet and the www for delivering government information and services to their citizens. According to Richard Heeks, e-Government is the application and use of IT by public sector organization i.e. government. E-Government is thus not just about the internet technology. The e-Government concept has been with Nepal for many years; long before the terminology of e-Government was invented. It can be used to switch traditional government by making it accessible, transparent, effective and accountable. The history of E-Governance implementation in Nepal has not been generally fruitful. Rebuilding of Nepal into its federal state has posed more challenges to the government for implementing policies, plan and to deliver efficient services to the general public using modern technology [1].

Despite the fact that there is a tremendous uses of portable advances, web and online media, the nation is as up till now not ready for the e-Government. The EGDI status of the country shows that the nation is still in its starting period for e-Government usage. However, Nepal is progressing in e-government implementation

on the basis of ICT policy and EGMP. Because of some of the major challenges: financial, human, technical, organizational as well as regulatory and other challenges are: lack of allocating separate fund for e-Government, poor citizen awareness and consciousness, lack of e-Literacy, Lack of quality based and professional ICT education, poor infrastructure and connectivity, web security and cyber crimes, digital divide, resistance to change by the government officials as well as organizations, lack of Leaderships, coordination and collaboration between different ministries, organizations and departments, lack of strategic plan and policies and political issues, poverty and corruptions etc. Due to these issues, the development is not expected as neighbor countries. Hence, the government of Nepal as well as the provincial government should now think for effective e-government system and its suitable policy and strategy for Province 1 and the nation as well.

OBJECTIVES OF THE THESIS

The overall objective of research is to access the scope of implantation of e Governance of with respect to reference of Province 1 Nepal.

LITERATURE REVIEW

E-government facilitates numerous online means of services with the assistance of information and communication technology (ICT) (Wang, *et al.*, 2012). The e-Governance projects mobilized at worldwide level with a short history since 2000 and recognized the customer's oriented services through an effective delivery of services and speedy accessibility in sequence to emerge the acceptable and build user of e-government services (Haider, *et al* 2015).

According to Kumar & Best [1], e-government may improve its services; the achievement and disappointment, as a result, depend on the size of the gap that exists between current realities and design of the e-government development [2]; and [3] also it facilitates interconnection between the government and its agencies (G-to-G), government and citizen (G2C) and government and business (G2B).

As said by United Nation Development Program, - "Good governance means governing systems which are capable, responsive, inclusive, and transparent. All nations, developed and developing, need to work continuously towards better governance. As said by World Bank - "good governance demands sound public sector management (efficiency, effectiveness and economy), accountability, exchange and free flow of information (transparency), and a lawful framework for improvement (justice, respect for human rights and liberties)." [4]. Among different definitions and a diverse number of characteristics for good governance, there are some common characteristics highlighted by those definitions which are accountability, effectiveness, efficiency, participation, responsiveness, and the rule of law. Good governance is not only the active and productive cooperation between state and citizen but also it divides the legitimate power between state and civil society [5]. Most of the studies and research about e-governance suggest that the use of ICT in the governance process helps the state to achieve good governance [6, 7]. The main beliefs of good governance such as accountability, transparency, responsiveness, and effectiveness and efficiency can be achieved through e-government.

Challenges

It was noted that Government in Nepal is still in its early stages and only 60% of its government agencies implement e-governance services. The country has challenges in all sectors which include political, social, technology and economic. Below listed are some of the major challenges:

1. Low Literacy Rate and Language Barrier

It is clear that the digital literacy rate of a country is always less than the literacy rate. The overall literacy rate of the country Nepal (for the population aged 5 years and above) was 65.9% in 2012. One more challenge for implementation of e-Government is the

language issues (English). To convert government service applications in the native language and make it "easy to use" [8] is also a challenging job for the government.

2. Lack of Human Resources

Public administration must have skills and qualified manpower to provide services to the citizens using tools of information technology. On the other hand, stakeholders-citizens also must have the skills to get such services through the modern tools of information technology. National information and communication technology policy 2015 had a mission to equip the "75 % people with digital literacy skills by 2020" [9]. Literacy of Nepal was almost 65.9 % in 2012 [10].

3. Digital Divide

Simply having a PC is not the source of information, there must be an internet connection. The gap between those who have easy access of information services like broadband internet and those who don't have is called the digital divide [11] [12]. Country's information and communication technology policy (2015) expected to provide broadband services to 90% population by 2020 [9]. However it is a challenging job to fulfill this gap of digital divide within a short period of time.

4. Political Instability and Sustainability

Political stability and sustainability is another factor. To implement a successful digital government i.e. e-Government, there must be a stable government and capable leader having a straight and clear vision and leadership. The longer-term and short-term plan and policy is necessary and essential for effective implementation and adoption of E-government.

5. Limited Financial Resource

Per capita income measures how much an individual earns within a year, it is the financial strength of an individual. GDP of Nepal was US \$2.36 billion and the per capita income was the US \$ 862 in 2017 [10]. This indicates that the financial strength of national and individual both are low. Hence, poverty and partial financial circumstance is also a challenge to develop digital government.

6. Insufficient Law, Regulation, Strategy and Plans

Government of Nepal showed the strong efforts and interest in digital government but these are not sufficient to implement electronic transactions. These necessities require amending all concerned laws, rules, and regulations. The legislation that can promise the secure transactions between two stakeholders trusts the digital government and makes a good environment for the participation of citizens.

7. Employee Barrier

Existing old age manpower’s are relaxed with the traditional administrative models of service delivery. Employees are considering the new system as a complementary system not substitute for the manual system [11].

8. Lack of Feasibility Study

Before implementing digital government it is necessary to make pre-study and assessment of e-readiness of the citizen, infrastructure, skilled manpower, and legislative structure.

9. Change in Technology

The technology is changing rapidly. With the change of technology different type of technical options are also available in the market. In the perspective of Nepal, due to lack of sufficient budget allocation, innovation and rapid change in technology is also a challenge for the implementation of digital government.

10. Security and Privacy

The misuses of information within the government as well as external threats may occur [12]. Personal data may be stolen or transferred to the private sector by poor authentication and Authorization system [13]. Inadequate security may discourage the use of digital government [11]. Hence, the safety and privacy

of information is another challenging for the government.

11. Less Priority

To implement e-Government and e-services effectively, there is a need of lots of financial plan for purchasing software and hardware infrastructure, and for conducting training programs. Digital system implementation always gets low priority [12] and least budget allocation, so less funding is another challenge.

12. Corruption

As said by TIN president Khem Raj Regmi, 2018; and Transparency International Nepal, 2009, the key corruption in Nepal is found in the political sector and the civil services. “Though there is a two-thirds mass of the government after the elections, the level of corruption has not reduced decreased.

RESEARCH METHODOLOGY

The study has to be conducted for Province-1 using descriptive and analytical research design based on qualitative and quantitative approach.

Purposive sampling design has been adopted in online and offline mode using strata as shown in table 1.

Table-1: Sampling design

S.N	Level	Respondents in %	Total No. of Respondents
	Province no 1, Nepal		
1	Local Governments <ul style="list-style-type: none"> • LGs of Sunsari District’s IT Officers • LGs of Morang District IT Officers • LGs of Jhapa District IT Officers 	22.22%	126
2	University/College Professional	12.67%	
3	Business (ICT) level service provider <ul style="list-style-type: none"> • Telecom Professionals & Engineers • ISP Professionals • Bank IT professionals 	29.36%	
4	Citizens / Service seeker	35.71%	

Data Collection

Structured questionnaire survey and scheduling has been applied with 5.0 Likert scale and affirmative, negative and undecided respondents and

opinion regarding different aspects of e services. These questionnaires have been finalized and validated using testing through service providers and experts of the field.

Instrumental Validity

Table-2: Reliability Statistics table

Variables	Cronbach’s Alpha	Total no. of Items (24)
Awareness	.834	5
Implementation	.761	3
Challenges	.801	13
Demographic:	.787	3
Age		
Education		
Gender		

Table 2 above shows Cronbach’s alpha collected as reliability statistics for data is greater than .7 that shows internal consistency of the questionnaires and the data collection is assumed to be reliable and valid. Thus, it can be concluded that the questionnaire prepared was consistent for the study.

RESEARCH FRAMEWORK

This analysis is done in order to find the significance and prominent factors affecting the E-Government implementation. The overall independent variables such as age, gender and education are being compared against the dependent variables such as challenge, awareness, barrier, and implementation as per the data analysis being conducted on these variables. The below figure 1 is clearer to understand the analysis.

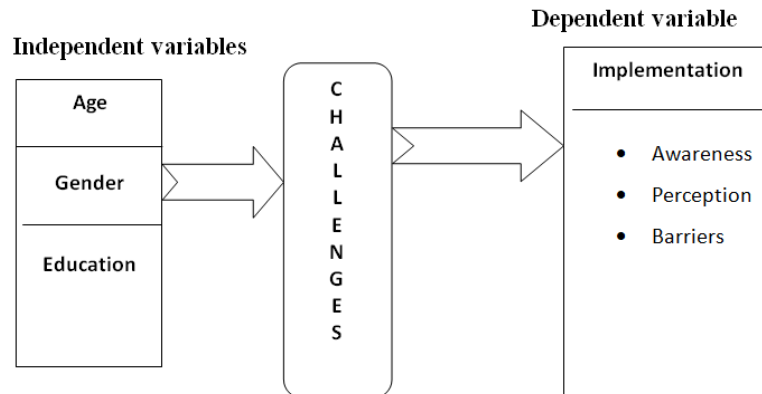


Fig-1: Factors affecting e-Government implementation

DATA ANALYSIS

Awareness Related Questionnaire – Frequency Analysis

On the basis of questionnaire; I have chosen a total of five (5) awareness related questions, which are

taken for the measurement of significance of the respondent's awareness on the subject matter of e-Government, collected within the respondent's size of 126. Below are the five awareness related questionnaire’s frequency analyses.

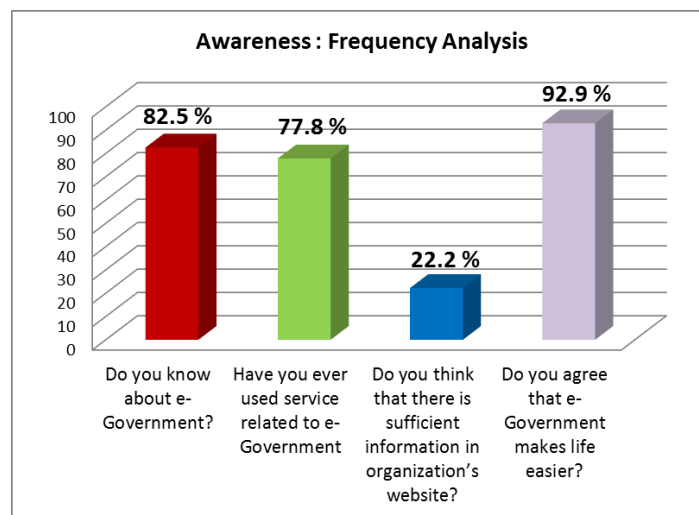


Fig-2: e-Government awareness

Implementation Related Questionnaire – Frequency Analysis

Implementation Related Questionnaires - Frequency Analysis Based on the questionnaire; we have chosen four (4) implementation-related questions, which are taken for the measurement of significance of

the respondent's views towards the Implementation of the e-Government system, among the data collected within the respondent's size of 126. Below presented are the four implementations related to questionnaire’s frequency analysis.

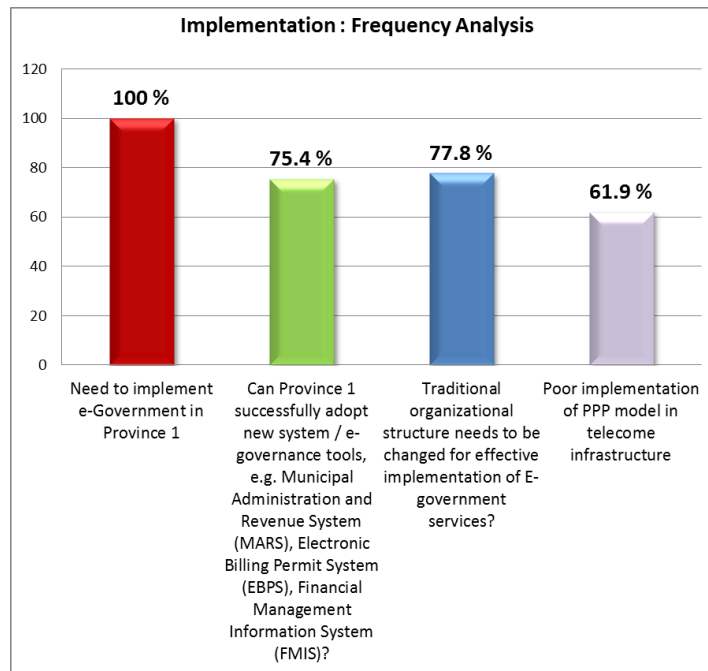


Fig- 3: e-Government implementation

Challenges Related Questionnaire – Frequency Analysis

Based on some challenges related questionnaire; some major challenges and or barriers-related questions are selected, which are taken for the measurement of significance of the respondent's expectation and views towards the implementation barriers / issues of the e-Government system, among the

data collected within the respondent's size of 126. Below presented are the different types of challenges / barriers such as human, capital / financial, organizational, technological, architectural or infrastructural, political, legal, and other kinds of e-Government related to questionnaire's frequency analysis.

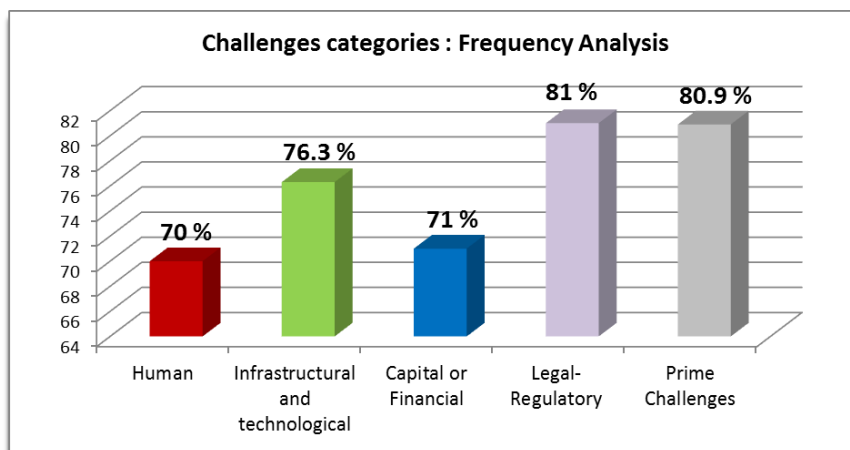


Fig-4: Challenges of e-Government implementation

Chi Square Test

Following are the relations used with respect to Chi-square test

1. Expression used to find Degree of Freedom (D.F) is given by –
D.F = (Row - 1) (Column - 1)

Df	P = 0.05
1	3.84
2	5.99
3	7.82
4	9.49

2. Tabular Values of Chi-square (X^2) also called Critical Value (CV) for given degree of freedom (D.F) is given by –

3. Expression used to find Chi-square (X^2) is given by –

$$X^2_{\text{Calculated}} = \frac{\sum (O - E)^2}{E}$$

Where,

O = Observed values and

E = Expected values and is calculated by using the below relation -

$$= \frac{(\text{Row Total}) (\text{Column Total})}{N}$$

Hypotheses Testing:

Hypothesis is particularly necessary in the search for cause and effect relationship. A chi-square test of independence was used to test H1 and H2.

- H1: There is no significant difference between perspective of male and female regarding e-government awareness
- H2: Knowledge and attitudes towards E-government challenges: *Human, Technological, financial, legal, regulatory & other*, are positively related to level of education and qualification.

The observed frequencies were compared to those expected by chance. The level of significance was set at .05

Finding from Chi Square Testing: Awareness and Challenges of e-Government Awareness

Gender of the Respondents * Do you know about e-Government? Crosstabulation
 $\chi^2 = 24.527$, df = 2, p < .05.

Gender of the Respondents * Have you ever uses e-Services? Crosstabulation
 $\chi^2 = 30.577$, df = 2, p < .05.

Gender of the Respondents * There is sufficient information in the organization’s website?
 $\chi^2 = 10.651$, df = 3, p < .05.

Gender of the Respondents *e-Government makes life easier? Crosstabulation
 $\chi^2 = 10.513$, df = 2, p < .05.

Challenges Prime

Education level of the Respondents*Low per capita income, political issues and corruption?
 $\chi^2 = 10.777$, df = 3, p < .05.

Human

Education level of the Respondents* Resistance to change by the government officials?
 $\chi^2 = 13.230$, df = 4, p < .05.

Technological

Education level of the Respondents*Most of the organization’s websites are not secured?
 $\chi^2 = 16.331$, df = 3, p < .05.

Legal & Regulatory

Education level of the Respondents*Most of the organization’s websites are not secured?
 $\chi^2 = 40.523$, df = 3, p < .05

Thus on the basis of the finding, the result of the hypothesis testing can be summarize as below table 3.

Table-3: Summary of Hypotheses Testing

Summary of Hypotheses Testing	Result
H1: There is no significant difference between perspective of male and female regarding e-government awareness	Supported
H2: Knowledge and attitudes towards E-government challenges: Human, Technological, financial, legal, regulatory & other, are positively related to level of education and qualification.	Supported

Hence from the above table 3, the results of the chi-square test of independence for H1 and H2 indicate a statistically significant difference between the observed and expected values. Hence, it states that there is an association between two variables (Gender and e-Government & Education and challenges: Human, Infrastructural/technical, Financial, Legal and other).

RESULT AND DISCUSSION

Based on the summary and findings, we came up with the following conclusions:

Majority people i.e. 68.85 % population are well understood about the popularity of the concept of

e-Government and they are very hopeful of sooner implementation of the e-Government systems in Province 1. It seems very much evident that the public of Province 1 is aware of the government’s action on e-Government. It is evident that there are lots of the major difficulties and barriers for the adoption and implementation of e-Government. It seems that educated and qualified citizens have better knowledge about the challenges of e-Government. Low per capita income, political issues, and corruption are the prime barriers for effective implementation of e-Government. Present vital challenge like COVID 19 has also added value of the implementation of e-governance in future. Clear vision and strategy, Awareness, ICT infrastructure, E-Skills, Training and Citizen

empowerment are the most crucial critical success factors (CSF) for an effective implementation of e-Government activities in Province 1.

Based on above findings, it can be said that majority of the citizens are well understood about the popularity of the concept of e-Government and they are very hopeful of sooner implementation of the e-Government systems in Province 1. Hence, it seems very much evident that the public of Province 1 is aware of the government's action on e-Government.

The variable named "challenges" has been set in order to collect the significance of the challenges and obstacles blocking e-Government. Four categories of challenges and barriers were found with their percentages: human challenges (70%), Infrastructural and technological barriers (76.3%), Capital or financial challenges (71%), and Legal, regulatory and other challenges (81%) and their data have been evaluated. Apart from that the challenges like COVID 19 has also added value of the implementation of e-governance in future.

Hence, it is evident that there are lots of the major difficulties and barriers for the adoption and implementation of e-Government. On top of this, the study and analysis showed that there is abundant level of human barriers being present that caused the obstruction due to their unwillingness towards a paradigm shift from traditional system into the new digital system.

The results of the chi-square test of independence for H1 and H2 indicated a statistically significant difference between the observed and expected values $p < .05$ for the observed and expected frequencies for H1 and H2. Also, the calculated chi-square value (X^2) was compared with the tabular value of chi-square for the significant level .05 and thus calculated chi-square value was found greater than tabular value. Hence, it states that there is an association between variables. It seems that educated and qualified citizens have better knowledge about the challenges of e-Government.

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Cite This Article: Chandan Bhagat *et al* (2021). Assessment of E Governance for National Development – A Case Study of Province 1 Nepal. *East African Scholars J Eng Comput Sci*, 4(4), 46-52.