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Effectiveness of Nepal's E-Government Service Delivery: A Case of Department of Passport (DoP)

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Abstract

The COVID-19 pandemic situation made governments and citizens take part in the use of technology to render services. The use of technology has revitalized and revolutionized public administration in many countries. All technology-driven services delivery also enhanced the trust of citizens towards the e-government systems. Also, the Government of Nepal (GoN) is moving towards the system of online service rather than service through physical presence because the pandemic situations forced to adopt online platforms for requesting public services. At the same time, the engagement on online activities increased during the pandemic for communication and other service-related activities. 'Passport' is an essential document issued by the government of residence required to travel other countries. In order to get a passport an applicant submits the filled-up form to the Department of Passport (DoP) with verified information through District Administration Office (DAO). In Nepal for a quick processing of the passport, the applicants can visit DoP and do the processing from there too. The information verification of the applicants is a sensitive and lengthy process in Nepal, and it is a paper-based. The DoP has an online pre-enrollment system that facilitates passport application processing. We assume that the introduction of technology improves service delivery. In this paper, the online pre-enrollment system of DoP is analyzed using E-Government Maturity Models (E-GovMM), and SWOT analysis. The views of the officials from DoP on the use of the system

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is collected through a purposive survey. Our findings from the study showed that the maturity level of the pre-enrollment system is in alignment with the maturity model, and the online pre-enrollment system implementation in the DoP has improved the traditional passport processing process. The pandemic situations also highlighted the need of online systems so that the social distancing could be practiced avoiding the spread of virus. Such pandemic situations can be more pressing and frequent in upcoming time. The maturity of the existing systems is necessary for which government should upgrade policy, human resources and technology. There has to be collaboration among various government agencies to provide single window online service delivery, which can be a sustainable solution to provide public service delivery in any disruptive situation. The government should embrace the concept of system thinking to develop whole of a government through collaborative effort in improving the public service delivery though E-Government implementation.

Introduction

Government' of a country governs the state and community. In doing so, the government provides various public services to its citizens that ranges from health, education, identity, and security. Constitution of any country is a legal document that directs the operation of public organizations to serve its people. The increase in population, political volatility, and the red tapes makes the government lethargic and non-transparent affecting the government service delivery. Public service delivery is a daunting task considering the population of a country and length of the service process.

In addition, the process requires a number of documents, and verification of the documents from various levels. The paperwork required for the service delivery makes the process lengthy and time consuming. The public agencies face challenges like time consumption and lack of transparency in public service delivery process. The use of Information and Communication Technology (ICT) can support to improve the traditional service delivery process. Electronic-government (e-government) implementation is use of ICT to acquire, store, process, and share data through electronic medium in the government working process. Nepal is still in early stage of e-government implementation despite practice for two decades. This research work examines whether the implementation of e-government systems can improve the public service delivery.

A case study of online pre-enrollment system of Department of Passport (DoP), under Ministry of Foreign Affairs (MoFA) is done that has been implemented as a web-based application to perform the online information processing of passport applicants. The online pre-enrollment system is an e-government system implemented in DoP to provide the data processing feature to support the passport issuing functionality of the department.

Literature review

Public service delivery as defined by World Bank is "A public service is a service benefiting the public that is provided by the government because it is underprovided by the market. The public benefits from outputs and outcomes of the given service, not merely inputs. For instance, buildings, textbooks, teachers, assurance of pedagogical training and quality instruction, are all inputs for delivery of education service, but the public service is to yield an output of students with skills". It is the services provided by the government institutions of a country to its citizens. Nepal has three-tier government structure local, provincial and federal. At each level, the people should receive public services in easy and simple way from the government. 'Government' is a bureaucratic structure that has established a mechanism to provide public service with standard set of rules and regulations (Improving Public Service Delivery in Nepal, 2019, Sharma and Muwonge, 2010). The rules and regulations are setup by developing policy and acts.

The main aim of government is to provide the government services in an easier way, but in Nepal the service is supply driven which has not been able to bring remarkable changes in the domain of public service delivery (Bhattarai, 2017). The demand of service requirement is increasing day by day as the awareness in population and access to the service is increasing. The traditional bureaucratic structure of service delivery and the paper-based processing system of the government is responsible for increment in the time of service delivery (Giri et al., 2018). The public service delivery also involves compilation, verification, and validation of data provided by the service seeker. This is a time-consuming process in the paper-based system that lacks proper record management. The effectiveness of public service delivery depends on the capability, resources, and motivation of the government in providing the service (Pfeil, H. et al., World Bank, 2018). In Nepal, the public service delivery happens through the combined effort of line agencies, and local bodies at the district, municipal, and village level.

Hence, there is a requirement of verification of documents from various levels to get the service from the government. The process demands coordination among the government agencies working at various levels. At the present scenario and looking towards the future of service demands, it is inevitable to use technology to establish the coordination by sharing vital information among the government agencies working at various levels. The people of Nepal have suffered political instability and disjointed red-tapes for decades, which has created scenario, where obtaining public service is not easy (Improving Public Service Delivery in Nepal, 2019). Transparency and accountability are required in service delivery, which have a lot of room for improvement in the case of public administration of Nepal. The existence of efficient public administration and service delivery are the measures

of good governance that is longed by the citizens of any country, which is only possible if the civil servants and political leadership understand the importance of transforming administrative culture by implementing cost-efficient administrative simplification and promoting e-government systems (Bhattarai, 2017; Improving Public Service Delivery in Nepal, 2019). Good governance is essential to obtain the long-term socio-economic development. Excellent public service delivery is one of the measures of good-governance. In order to setup a good governance system e-government systems can play a crucial role to maintain transparency and accountability in public service delivery (Lallmahomed et al., 2017; Sharma et al., 2014; Shrestha et al., 2015). Various researchers working in the area of New Public Management (NPM) have characterized better functioning of the organizations as:

a. flexibility/autonomy in decision making,

b. delivering high quality services like private sector style,

c. considering citizens as client,

d. performance measurement, and

e. Managerial support system - more usage of ICT, human resource, training etc.

From NPM concepts, treating citizens as customer, improved human resource, usage of ICT, and performance measurement are important issues to consider for better service delivery.

The management theory also promotes the use of ICTs for management of the organization and better service delivery, followed by almost all of the private and public organizations of the current time.

SWOT Analysis

SWOT (Strength, Weakness, Opportunity, Threats) analysis is an analytical tool used in developing the strategic planning of organization to get an edge over other organizations (Gurel and Tat, 2017). The tool is useful in identifying the priorities of an organization towards developing a strategy in a particular field of interest, like in case of e-government development the tool is extensively used to understand the strength, weakness, opportunity, and threats of the system while developing and implementing such systems (Avny, 2007, Elsheikh and Azzeh, 2017). SWOT of the e-government development is done within the discourse of 'efficiency, productivity, and cost reduction'. The strengths and weaknesses are internal variables, which can be controlled by the implementing organization, while opportunities and threats are external variables, not under the control of organizations, though, in some cases one can exert some influence (Damian et al., 2014).

Electronic government

The term governance is referred to as the use of economic, political and administrative power when managing a nation's affair, which includes

citizen's interest articulation and the exercise of legal rights and obligations (Ajibade et al., 2017). E-government is the use of ICTs to facailitate the service delivery. E-government systems make government services easily accessible to external and internal stakeholders through the online platform with the use of ICTs (Janowski et al., 2015; Layne & Lee, 2001; United Nations, 2018). It is technology-enabled public sector reformation aiming at providing an efficient and customer-centric model of government. The government is a combined unit of various ministries and agencies, and these organizations need to work in coordination with each other to provide effective and efficient services.

The e-government standards describe the digitization scenario, information sharing, and service delivery. A rapid development in the field of ICTs has influenced service delivery mechanisms. E-government provides benefits to the stakeholders by enhancing the efficiency and availability of service delivery, there by reducing the cost of service, and increase of return on investment of the government (Avgerou, 2008; Basyal and Seo, 2016; Luk, 2009; Yildiz, 2007; Zheng et al., 2013). The benefits of e-government have attracted countries to start the e-government implementation initiatives, by developing ICT based systems to provide services to citizens. The initiation has reduced the gap of communication between the government and citizens, where the citizens can access the government services through the online platforms.

The implementation of e-government systems has reduced the gap of communication with the government organization as well as the time and cost associated with the service delivery mechanism (Basyal and Seo, 2016; Moatshe, 2014). The urban areas are more networked with the ample presence of ICT services and service providers. According to the E-Government Development Index (EGDI) published by the United Nations Development Program (UNDP), the ranking of Nepal has been improved from 130 to 117 positions from 2003 to 2018 in a time span of 15 years.

The values of the respective components have improved in 2018, which indicates the improvement in the situation for the implementation of the e-government in Nepal. The value is a composite of the inherent human capital or the Human Capital Index (HCI), the status of the development of telecommunication infrastructure or the Telecommunication Infrastructure Index (TII), and the scope and quality of online services quantifies as Online Service Index (OSI). It is listed in Table 1 for Nepal at different timelines.

Table 1: EGDI data of Nepal

	2022	2020	2018	2016	2014	2012	2010	2008	2005	2004	2003
EDGI Value	0.51170	0.46990	0.4748	0.3458	0.2344	0.2664	0.2568	0.2725	0.3021	0.2807	0.2684
EDGI Rank	125	132	117	135	165	164	153	150	126	132	130
E-Participation Index (EPI)	0.23860	0.3690	0.7809	0.5085	0.2941	0.0263	0.0571	0.0227	0.0794	0.06556	0.1379
E-Participation Value Rank	143	137	55	89	110	134	127	152	73	75	61
Human Capital Index (HCI)	0.56360	0.54050	0.4957	0.4714	0.3774	0.4521	0.5821	0.5176	0.5000	0.5000	0.04800
Telecommunication Infrastructure Index (TII)	0.51230	0.46910	0.2413	0.1674	0.1684	0.0597	0.0227	0.0119	0.0063	0.0063	0.0064
Online Service Index (OSI)	0.45920	0.40000	0.6875	0.3986	0.1575	0.2876	0.1683	0.2876	0.4000	0.3359	0.3188

Source: *UN, 2022*

Electronic government and public service delivery

Carlson, Davis and Leach (2005) conceptualized public service delivery as the relationship that exist between policy makers, service providers and the populace. As per their definition, it consists of services and its support systems which are generally referred to as state responsibility. These services include infrastructure, social services and services that ensures personal security. Public service delivery is providing citizens with services of public interest. These include: security, education, energy, water, public transport and healthcare. Fox and Meyer (1996) defines public service delivery as the provision of public goods which are tangible, and services which are intangible and the private sector cannot produce. Similarly, Riekert (2001) views service delivery as the provision of a product or service by a government body to the citizens.

Due to the increase in customers' expectations and technological revolution, public sector organizations have come under increasing pressure to deliver quality services and improve efficiency like the private sector (AA et al., 2015; Ajibade et al., 2017; Sharma et al., 2014). Citizens needs and expectations, are changing when it comes to governmental services and their quality management (Ajibade et al., 2017). However, service quality is a measure of how well the service level delivered matches citizens' expectations.

Thus, governments are saddled with the responsibilities of providing goods and services that meet the citizen's expectations. The implementation of e-government impacts the efficiency of the internal process of the government and transforms the relationship between government and society (Budding et al., 2018). E-government helps to improve public service delivery by establishing connections between government and citizens,

which strengthens transparency, responsiveness, and accountability (Sodhi, 2016). E-Government has developed not only as the use of ICT in government process but as a tool to improve democracy and participation of citizens (Inkinen & Merisalo, 2014).

E-government maturity model (e-Gov MM)

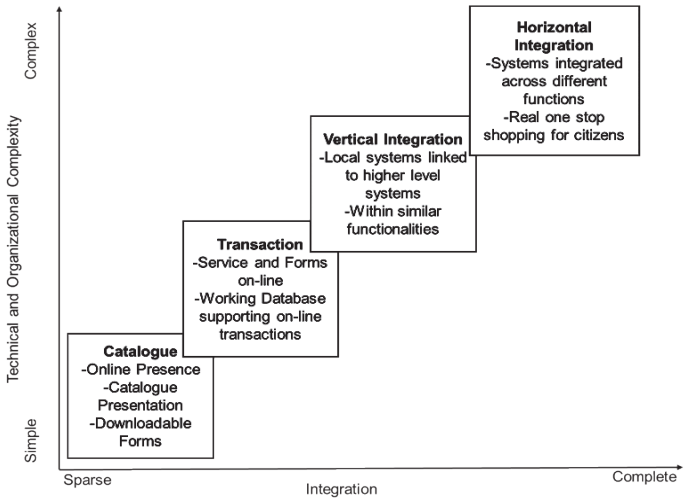
The e-government Maturity Model (e-Gov MM) is used to evaluate the existing e-government systems against international best practices in the area of e-government implementation, including the formulation of organizational strategies and policies, management of ICT, operative management, and organizational capabilities of human resources and the organization overall (Almuftah et al., 2016). The maturity level of e-government indicates the amount of use and readiness of the government to support the use of technology in government activities.

UN ranks the amount of improvement in the field of e-government of a country through the EGDI. The investment in the development of ICT infrastructure, education, and business environment are the major reason for the maturity of e-government (Das et al., 2017). The maturity models consider the presence of services through electronic medium, the way of ease of communication, and the integration of functionalities within and outside the agency.

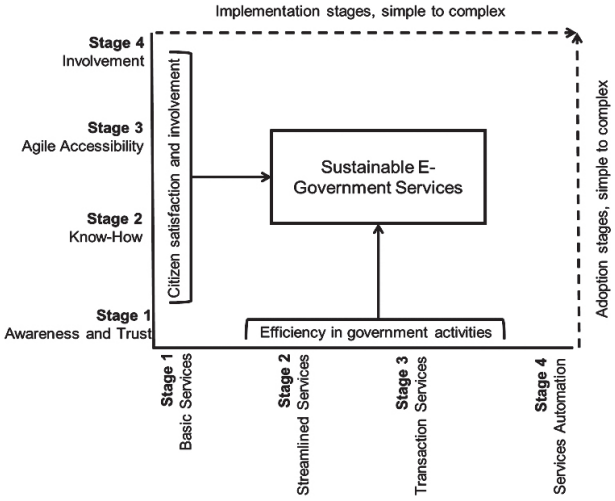
Such models are stage models that divide the e-government into various development phases in order to understand the current status and helps to develop a roadmap for future development. Layne and Lee (2001) have presented a four-stage model popularly used, and many of the later models have considered it as their base model. The stages defined by the model are i) Catalogue ii) Transaction iii) Vertical Integration and iv) Horizontal Integration. Using this model the online portal of DoP is tested whether each of the stages is fully complied or not in order to identify the level of e-government development.

Layne and Lee maturity model

Layne and Lee (2001) is a popular four-stage maturity model (see Fig. 1), which is the base model for many of the maturity models. The model was developed to support the chaotic and unmanageable initiatives of e-government development. The model divides an e-government development into various stages, which helps the public administrators and their respective organizations to understand their e-government development stage and perform the required steps to develop their e-government fully. Figure 2 shows the dimensions and stages of e-government development identified by Layne and Lee. The vertical axis indicates the technical and organizational complexity that varies from simple to complex. The horizontal axis indicates the level of integration that varies from sparse to complete.



E-government maturity model for sustainable e-government services: A sustainable e-government service is the ability of citizen-centric trustworthy e-government services that adopt state-of-the-art technology to deliver a cost-saving, resilient, and effective service, and to support active participation and satisfaction from all levels of user. While defining the sustainability of e-government services, the authors have considered two different dimensions—implementation and adoption. The implementation dimension deals with the technology, budget, and human resources required to implement e-governments, whereas the adoption dimension considers the design and approach of e-government service delivery for wider user participation and adoption (Joshi & Islam, 2018).



Implementation perspectives

This model considered four implementation stages and emphasized the integration of e-government systems before invoking the transaction stage. The stages and the tasks under those stages are as following to provide a detailed plan for e-government implementation.

Adoption perspectives

This proposed model identifies four adoption stages, where stakeholders have gradually experienced e-government services and has proactive involvement in e-government activities. The adoption side is focuses on human and organizational issues. The adoption stages emphasize the creation of value for stakeholders at each stage of e-government implementation. The maturity model integrates the adoption stages within the implementation stages, to better guide governments toward developing combined strategies to achieve citizen satisfaction, along with efficiency in the implementation of e-government services. The adoption stages, and the tasks, which fall under them are as follows:

Stage 1 - Awareness and trust

This stage is to go along with the introduction stage of e-government implementation. The stakeholders have to accept changes that take place in the delivery of government services, and channels of interaction. Along with awareness and training programs, the government has to put efforts into making stakeholders ready for the change.

Stage 2 - Know-how

It refers to the practical knowledge of how to adopt the offered e-government services. The stakeholders have to enhance their knowledge to involve in the e-government activities to get streamlined services. The governments have to provide appropriate training through workshops, seminars, television programs, and other means of communication on the benefits of electronic government services. They all need to be aware on how to achieve and access these services.

Stage 3 - Agile accessibility

This stage goes along with the integration and transaction stages of implementation. Various factors, such as access to technology, personal circumstances, social influence, and availability of service, reliability of service, security, and trust will affect user's decisions to adopt or discard the online services. Among these factors, access to technology is the most critical in relation to developing countries. Therefore, the model emphasizes the establishment of agile accessibility to e-government services. Agile accessibility to e-government services can be achieved by developing various channels to deliver services (e.g., tele-centers, kiosks, private business partnerships, and rural municipalities). Especially in the context of developing countries, where the digital divide among people is apparent,

agile accessibility will make sure that stakeholders with various levels of ability will have an equal chance to acquire e-government services.

Stage 4 - Involve

The maturity stage of user adoption of e-governments is described by the involvement of stakeholders in government decision-making. At this stage, stakeholders will have the chance to have their say in government activities, and can actively participate in government legislation. Governments can acquire the view of stakeholders from various channels, such as online consultations, live chats, and public-polls.

UN/ASPA–five stages of e-government development

United Nations Division for Public Economics and Public Administration (2001) study "Benchmarking E-government: A Global Perspective, Assessing the Progress of the UN Member States" identifies the five stages for quantifying progress of e-Government. The study identifies e-Government stages as representative of the Government's level of development based primarily on the content and deliverable services available through official websites.

Emerging

An official government online presence is established through a few independent official sites. Information is limited, basic and static.

Enhanced

Government sites increase; information becomes more dynamic. Content and information are updated with greater regularity.

Interactive

Users can download forms, e-mail officials, interact through the web and make appointments and requests.

Transactional

Users can actually pay for services or conduct financial transactions online.

Seamless

A complete web presence of necessary services is available for a seamless flow of service and information.

Methods

This research is done using a mixed method, where e-Government Maturity Models are used to analyze the status of existing online pre-enrollment system and a purposive survey is done to collect the views of the officials on the system. The qualitative and quantitative data are collected through observations, historical records, documentary, and online survey. The collected data are analyzed to obtain the findings which is used to understand the status of public service delivery through the implementation of the e-government system.

Result

The online pre-enrollment system of DoP is examined using the e-Government Maturity Models (e-Gov MM, see Table 2) to identify the current status of the online system. From Table 2, it can be observed that the online pre-enrollment system has fulfilled the basic stages of the maturity models. The basic stage involves the presence and deployment of the organizational website to share information and perform information transaction. Hence, the transaction state of maturity is achieved by the online pre-enrollment system. Due to this, citizens can use the website to obtain information for passport application and provide the application through the website. The applier can get date and time for appointment for actual enrollment of data. Some of the stages are partially achieved. The lack of mechanism for relevant information exchange between similar and different organizations at various level have hindered in the service automation and fully web presence of the department. At present, there is linkage of information of National ID to verify the applicant identity.

Table 2: Findings through the maturity models

Lyane and Lee Model		E-Government Maturity Model for Sustainable E-Government Services				UN / ASPA– Five Stages of e-Government Development model	
		Implementation		Adoption			
Catalogue	Fully Achieved	Basic Services	Fully Achieved	Awareness and Trust	Partially Achieved	Emerging Web Presence	Fully Achieved
Transaction	Fully Achieved	Streamlined Services	Partially Achieved	Know-How	Partially Achieved	Enhanced Web Presence	Fully Achieved
Vertical	Not Achieved	Transaction Services	Partially Achieved	Agile Accessibility	Not Achieved	Interactive Web Presence	Partially Achieved
Horizontal	Not Achieved	Services Automation	Not Achieved	Involve	Not Achieved	Transaction Web Presence	Fully Achieved
						Fully Web Presence	Not Achieved

Observing the detail working mechanism of the online pre-enrollment system, YouTube videos on the feedback of the working of the online pre-enrollment system of the DoP by various people a SWOT analysis of the online pre-enrollment system is done as presented in Table 3. From the SWOT analysis (see Table 3), it can be deducted that due to the present maturity level of the online pre-enrollment system the passport processing time has been reduced and the process has been automated, the response time has been fairly reduced, and the bulk data management has been improved. Even in the obtained level of maturity the system has weakness like reliability and interoperability and in some cases the user interfaces are still complicated.

There are opportunities to improve the digitization of the personal information, improve the digital awareness to reduce the Digital Divide, potential of creating 24/7-time frame for passport application, releasing civil servants for high-skilled tasks and establish exchange of information. (The

respective organizations collecting the passport details have specified their time for online applications.)

Table 3: SWOT analysis of online pre-enrollment system

Strength	Weakness
• Reduce time for document processing • Reduce response time from initial customer contact • Improves bulk data management	• System reliability and interoperability among several technology platforms • In several cases, end user interfaces are too complicated
Opportunities	Threats
• Improvement of digitization of personal information. • Improvement of digital awareness to minimize Digital Divide. • New potentials for creating 24/7 timeframe for application management. • Releases civil servant work hours from routine work to high-skilled tasks • Establish exchange of information	• Decline of the national economy and budget deficiency. • Blind trust on IT potential for diminishing costs. • Data security • Outsourcing of the crucial public sector tasks to private sector • The e-readiness of the targeted audience.

Purposive sampling was done with the officials working at MoFA deputed at the DoP previously or at present time to rate the pre-enrollment system of DoP for online application processing in order to measure the performance of service delivery. The descriptive statistical analysis of survey responses is presented in Table 3. From the online survey form 32 responses were received from the officials of MoFA, who worked previously or are currently working at DoP. A total of 28 respondents are male and 4 of the respondents are female participants.

Majority of the respondents are class III officers (24), 7 of them are senior assistant, and one of the respondents is class II officer. 20 of the participants have education of post-graduate or above, 11 of the participants are graduate, and one of the participants has higher secondary education degree. The age of the respondents varies from 20 to 40 years. Observing the descriptive statistical values of survey response presented at Table 4, it can be deducted that most of the officials who participated in the online survey agree that the system is easy to use. They also agree on the reduction of application time and application processing time with the use of the online pre-enrollment system. The officials have neutral response in the reliability of the system, with majority of the respondents agreeing on the indicators of the reliability. The officials agree that the citizens have been taking the support of the intermediary in the online application process, despite of having all the necessary instructions online. The officials also have neutral thought on cost saving with the use of the online pre-enrollment system where majority of the respondents agree on the indicator response. The mode of the individual questions also supports the

positive response of the officials as shown by the mean value. Lower values of the standard deviation of all of the responses indicate that the responses are not widely dispersed. From the response statistics it can be concluded that the officials agree on the improvement of service delivery through the existing maturity of the online pre-enrollment system.

Table 4: Survey Results

How will you rate the present pre-enrollment system of DoP for online application processing? [Choices 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree]									
		Choices					Mode	Mean	Standard Deviation
S. #	Ease of Use								
201	The public find online pre-enrollment system is easy to use.	1	2	3	4	5	4	3.59	1.01
202	The public find online pre-enrollment system user friendly.	1	2	3	4	5	3	3.62	0.97
	Responsiveness								
301	The online pre-enrollment system has reduced the application time.	1	2	3	4	5	5	3.91	1.06
302	The online pre-enrollment system has reduced the application processing time.	1	2	3	4	5	5	4.16	0.95
303	The feedback/complaint mechanism is easier for public.	1	2	3	4	5	4	3.53	1.16
	Reliability								
401	The public can check the status of passport processing online.	1	2	3	4	5	4	3.09	1.23
402	The error in information uploading is reduced	1	2	3	4	5	4	3.81	0.86
	Assurance								
501	The public like to have the online payment system with the pre-enrollment system.	1	2	3	4	5	4	4	0.84
502	The public is ready to provide required personal information online.	1	2	3	4	5	5	3.78	1.13
503	The public is satisfied with the online pre-enrollment system.	1	2	3	4	5	4	3.78	0.79
	Empathy								
601	The public can easily communicate with DoP through the online system.	1	2	3	4	5	3	3.16	1.11
602	The public takes the help of intermediary to fill the information in the online pre-enrollment system.	1	2	3	4	5	4	3.97	1.03
	Cost Saving								
701	Office travel cost is less due to the use of the online pre-enrollment system.	1	2	3	4	5	4	3.53	1.19

702	The public have spent extra in passport application despite of the online pre-enrollment system.	1	2	3	4	5	4	3.37	1.07

Discussion

This research involves both the qualitative and quantitative data collected by the researchers through observations, historical records, online-survey and websites. Three e-GovMM are used to examine the maturity of the online pre-enrollment system. The findings showed that the system has achieved medium level of maturity where the transaction of information has been possible through the online platform. The implementation maturity status of the e-government system in DoP is in the transaction state, where the citizens can transact required information with DoP through the online pre-enrollment system.

The e-government system should provide a fully automated service from the government and citizens also think from the same perspectives as the government is responsible to provide the service once the payment for the service has been made. A complete automation of government services in the case of Nepal has not been achieved due to the existing working mechanism and structure. Most of the organizations have developed the e-government systems in silos that provides organizational services to the citizens but the services of the organizations have not been interlinked due to which a complete automation has not been attained. This has not provided the whole of a government effect in the implementation of e-government system.

The citizens are compelled to use different digital gateways to obtain the services from various government organizations including verification of documents, which is very much necessary before requesting for any kind of services from the government from birth registration to passport issuance. The initiation of the online pre-enrollment system at DoP has reduced the processing time as the error and time associated with data-acquisition from the citizen has been reduced. The result has been achieved due to the high the e-participation index (0. 7809) despite the low level of development in telecom infrastructure development index (0.2413) as pointed out by the EGDI released by UN. This indicates that people are inclined in using the available e-government systems to obtain the required services.

Conclusion

At the current maturity level of the online pre-enrollment system, it has helped to reduce the application processing time by digitizing the information at the start of the application process. Presently, every Nepalese citizen need to have enrollment of national identity number, which is used to verify the information provided in the pre-enrollment system. This has reduced the verification process. It is evident from the observations of e-Government maturity models and SWOT analysis of the existing pre-enrollment system

that the "online pre-enrollment system implementation in DoP has helped to improve the passport processing process."

Now-a-days, a citizen can acquire a new passport in minimum two days from DoP. The reduction in time has been possible with the use of the online pre-enrollment system and national identity number that has reduced the time for digitization of the data for application processing compared to the paper-based system that generated a lot of errors while digitizing the form by the officials.

Also, the paper-based task is tedious; where the time consumption is high for digitizing the data and further processing. The online pre-enrollment system collects data directly from the applicant so the chances of error in data entry is almost none. The live enrollment system at DoP and ten foreign missions abroad captures photo including the required information which has further sped up the passport processing time. The pre-acquisition of the data as well as the live enrollment system helps in fast processing at the DoP once all the data verification has been done. The additional services of online payment system have also helped to improve the process by accepting the digital payment system to enhance the application process. Thus, the findings through the observation of the system maturity through the e-Government Maturity Models, SWOT analysis and the online survey with the officials help conclude that the "online pre-enrollment system implementation in DoP has helped to improve the passport processing process." i.e., e-Government system has helped to improve one of the public service delivery processes in Nepal effectively.

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