Envisaging Capacity Development to Enhance eGovernance Implementation (ECDE-eL): Namibian (Case-Study)

Semba Funda
University of Namibia
(UNAM)
Windhoek, Namibia

Jameson Mbale
Copperbelt University
(CBU)
Kitwe, Zambia
Email: mbalej [AT] yahoo.com

Abstract: **This e-Governance is being used by many governments around the world to improve information and service delivery to their citizens. For it to succeed, it needs adequate and competent capacities in all walks-of-life, particularly in the rural sectors where resources are scarce. It is against this background that this work envisaged on the ways of improving and developing the existing capacities on the acquisition of current and upcoming technological skills to effectively manage the Namibian eGovernance projects. The work further suggested on how the missing capacities could be acquired and also how the Public and Private Sectors could collaborate with each other for the efficient delivery of e-Governance in Namibia. Also, the study explored on how the Namibian Government urgently needed to prioritise the development of e-Government capacity to ensure that the implementation become a success and reality. Therefore, this work introduced a capacity framework model whose seven functional components would serve as a guide to e-Government leaders when making decisions regarding capacity building.**

Keywords:- ECDE-eL ; eGovernance ; capacities ; capacity-framework ; OMAs ; management and technical skills

I. INTRODUCTION

The advent of e-Governance has seen a radical change in the way Governments around the world provide services to their citizens and businesses. Thus, the importance of Namibia's capacity to implement and deliver e-Governance successfully has risen significantly over the years in their bid to provide such services to the people

A. Statement of the problem

The capacity of a country to implement and deliver e-Governance plays a critical role in the success of such projects. Hence, the motivation behind this study was to determine what could be done with the available capacities, identify which of them needed to be improved on, pinpoint the ones that were lacking and to find solutions for them. According to the e-Government Readiness Report [1],the majority of the population is not touched by the Information and Communication Technology (ICT) revolution and that there are a number of Internet use problems in Namibia including slow Internet access linked to congestion and high prices for bandwidth. In addition, the report further stated that Namibia still had a limited overall capacity in the field of ICTs. Furthermore, the report mentions that a great burden is placed on the Education Sector to address human resource issues that will enable Namibia to accelerate its development as a networked society.

Furthermore, the work developed a capacity framework that would guide e-Governance leaders when making decisions regarding capacity. In that way, this work would contribute towards helping determine which capacities needed to improve and identify some of the factors hindering the implementation of e-Governance in Namibia. The model could also be used by stakeholders and policy makers when making decisions on critical issues relating to e-Governance capacity.

In order to make this work a success and reality, the following research questions were addressed and tackled:

- How can the Public and Private Sectors build on the various capacities to implement and deliver e-Governance in Namibia?
- What capacities are essential for e-Governance implementation and delivery?
- What can be done with the available capacities in the Public and Private Sectors to ensure implementation and delivery of e-Governance in Namibia?

II. LITERATURE REVIEW

In [2], it was stated that literacy remained a major barrier to the development of e-Governance in African countries. On top of literacy, he said that a well-trained human capital is fundamental for the adoption of e-Government and its scarcity was another challenge in Africa. Furthermore, he pointed out that ICT infrastructure was a key determinant of development in the knowledge era of which Africa had lagged behind in the

past century in that regard. He emphasised the need for the trend to be reversed by intensifying heavy investments on infrastructure in this crucial period where Africans needed to catch and capitalize on the opportunities offered by ICTs.

The Namibian Government would also need to address the literacy problem in the country especially in the rural areas. Adult literacy programmes and others such as basic computer classes could be introduced at minimal costs to encourage people to participate in them. Adding to that, they would also have to invest more in well trained human capital and ICT infrastructure. The budget allocated to this and other major ICT spending would have to be relooked at to ensure that money is being Governance.

It was also noted [3] that as a further effort to boost the usage of the e-services, the Government had also been making a broad range of promotional initiatives in encouraging the public to utilize the e-services. To do this, they said that more emphasis was probably deployed in educating the public and making them aware of the e-Government services that were available online.

In the same way, the Namibian Government would need to embark on a rampant program to educate and sensitise the citizens of the existing e-services that would be provided to enable them to get involved and benefit from e-Governance. To do this, they could use the various media such as newspapers, radio and television. For example, call-in programs on various radio stations could be conducted in various languages to answer questions that would be raised by the public. These platforms could also be used to clear up issues surrounding the use of e-Government services.

With reference to the e-Governance Policy Report [4], the implementation of e-Governance would require significant skills upgrade and recruitment of IT experts in various Government Ministries to realise the e-Governance vision. The policy went on to say that effectiveness of e-Governance would require training of people and that maintaining technological infrastructure required IT skilled resources. Furthermore, it also stated that the Government of Namibia would need to create mechanisms to acquire the best ICT experts as it would have to compete with the private (commercial) sector to recruit the necessary IT skilled people. An expedition of these initiatives, such as training, would in turn ensure that e-Governance progresses more promptly.

However, with the shortage of skilled IT personnel in Namibia, the Government would also have to develop attractive remuneration packages in order to retain these newly trained employees and other ICT experts. This would reduce losing valuable employees to the companies that may offer higher and more attractive packages in order to lure them.

Among the critical issues responsible for e-Government success that were identified in India at the fifth (5^{th}) International Conference [5], it was noted that a major job to explore the capacity gaps had to be done and once that was done, identify the skills required. An example was given that went on to say that if there was a need for a core team within a Government Department, the skills that were required needed to be identified and a plan needed to be drawn up to source them. Furthermore, the following two questions had to be answered. Were they going to get the required resources in the Government or were they going to supplement them from outside? They observed that if the latter, the issue of market related salaries had to be addressed. In addition, even though the Government had worked with the most prominent IT and consulting firms, the required talent with both technical skill domain and knowledge of Government were in very short supply and that implied that there was a very pressing need for developing a network of academic institutes and relevant syllabuses to train and produce the required talent pool and provide career roadmaps for such trained persons. In the same way, like previously stated, Namibia would also have to go through a similar identification process in order to establish the missing skills and devise the most suitable means of obtaining them. These skills could either be attained from within Government by looking at other O/M/As. If the required skills are not found, then the Government could seek services of reputable recruitment agencies, such as Jobs Unlimited, to source them.

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In the same way, a similar identification process could also be undertaken in Namibia in order to establish the missing skills and devise the most suitable means of obtaining them. One way that this could be achieved is to employ foreign experts on contractual basis. A local Namibian citizen could be assigned to them as an understudy whom they could train. Once the contract is completed and management is confident that the necessary skills transfer has taken place, the incumbent understudy could then take over those responsibilities.

III. THE ECDE-EL MODEL

A. Government Offices Ministries and Agencies(O/M/As)

The Government Offices, Ministries and Agencies (OMAs) each decide what kind of services and information will be offered online to the various citizens and businesses. These decisions are guided by the available legislation that has been laid out by the e-Government leaders. The OMAs should each comprise of a team that is responsible for daily running of e-Government services in that particular OMA. That is, they take care of content to put in the storage and also attend to queries and process tasks requested by the users that are passed on to them by the e-Government Processing Unit.

B. Legistration

The legislation component houses all the rules and guidelines that govern e-Government. These are made by the e-Government leaders such as the political leaders who are members of parliament and the top civil servants involved in the e-Government projects. Some of the rules that could be specified here are: Resources that should be channeled towards e-Government development, deployment and maintenance; the content that will be available online to the public; issues surrounding digital signatures: persons responsible for carrying out particular tasks and processes to following when carrying out a task.

C. Storage

The Storage is the main medium where e-Government services are stored. It is basically a large central database that houses services and data that is loaded by all the participating OMAs. PostgreSQL could be used to develop the database. It has the same concepts and reliability as Oracle, but it is an open source software and hence the cost saving could be immense.

D. e-Government Processing Unit

The e-Government Processing Unit processes requests made by the users. Once the request is processed it is then passed back to the storage where the user can get the result. Should the service require feedback from the individual O/M/A that provides it, it is then sorted accordingly and passed on to that respective O/M/A that needs to handle that particular request. This can be done in the form of an email notification sent to the O/M/A, alerting the person responsible for the task that something needs to be done. Once the task is completed, it is then uploaded to the storage and the user is also notified of its availability. The results can also be sent directly to the user via e-mail or short message text to improve efficiency. The underlying technologies that could be used could be developed by the in-house Government IT specialists in collaboration with programmers from the Private Sector.

E. Capacities

Various capacities are involved at each stage. The Government O/M/As must have the necessary capacity in terms of infrastructure and skilled manpower to be able to implement and maintain the e-Government services. For instance, there is a need to have highly trained Software Engineers that are cable of designing and modifying the necessary platforms to run the services being offered. These should also be able make changes to the design should the need arise. Network specialists, System Administrators and Information Technology Technicians must also be available to carry out the maintenance and ensure optimal operation. These should also ensure that the services are always available to the users at all times.

F. Internet

The Internet provides a link between the users and e-Government services. This should be reliable and cost effective to cater for a wide spectrum of people. The Internet could also allow people in deep remote arears to have access to the services offered without them having to travel long distances. The desirable connection would be broadband because of the higher speeds that it offers. This would make access to the services feel seemless and acceptable as the users wouldn't have to wait too long for a service to load on their device.

G. Users

The users are the beneficiaries of the e-Government System. They comprise mainly of citizens and businesses. In addition to having a decent Internet connection they should also have the capacity in terms of skills required for them to access and extract what they need from the e-Government platform. There many different kinds of users and each may have different needs. A user should have the basic computer literacy skills to be able to log on to the system and work their way around it.

IV. DISCUSSION

It should also be noted that the results show that the majority of Government Employees are not involved in e-Government projects including some respondents in senior management. In addition, even among those that stated that they are involved in e-Government projects, there were some that felt that they were not actively involved in them. As shown from the collected data, the majority of the respondents that are involved were from the category of middle management. A further probe into the role played in e-Government projects revealed that the majority of them were merely IT support staff. From these findings, it can be deduced that most of them do not have the relevant skills required to develop complex e-Government systems. The Chi-square tests performed (see TABLE I) confirmed that there is actually no relationship between the respondents' position and their involvement in e-Government projects at the respective O/M/A.

TABLE I. CURRENT POSITION * INVOLVEMENT IN E-GOVERNMENT PROJECT CROSSTABULATION

CHI-SQUARE TESTS

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.284a	2	.868
Likelihood Ratio	.270	2	.874
Linear-by-Linear Association	.087	1	.768
N of Valid Cases	85		

a. 2. Cells (33%) have expected count less than 5. The minimum expected count is 1.04.

It is also clear from the results that 61% of the Government Employee respondents do not poses project management skills. Even though 89% stated that they handle tasks by prioritising them, the lack of project management skills limits the magnitude of projects that they can actually handle. This is a worrying factor as most e-Government projects require that participants have adequate skills in project management to be able to complete tasks successfully. A review of the Chi-square tests done (see TABLE II) showed that there is no relationship between the respondents' current position at their respective O/M/A and their possession of project management skills.

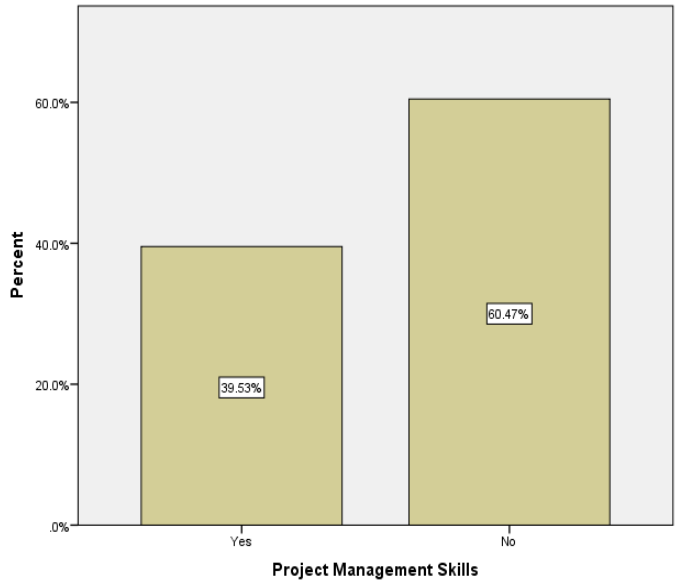

Figure 1. Project management skills of respondent

Figure 1 shows that the majority of respondents (61%) in the sample of Government Employees do not have project management skills.

TABLE II. CURRENT POSITION * INVOLVEMENT IN E-GOVERNMENT PROJECT CROSSTABULATION

CHI-SQUARE TESTS

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.114a	2	.010
Likelihood Ratio	9.056	2	.011
Linear-by-Linear Association	8.164	1	.004
N of Valid Cases	86		

a. 2. Cells (33%) have expected count less than 5. The minimum expected count is 1.04

A look at the Figure 2 confirms that 60% of respondents in the sample of General Public do not know what e-Governance is. Among the 40% that know, the majority of them believe that the most important benefit is improved service delivery as opposed to improved access to information. The study also revealed that 99% of the respondents feel that the Government is not doing enough to sensitise the public on e-Governance. From these statistics, one can deduce that people do not feel like they are actually involved in e-Governance implementation.

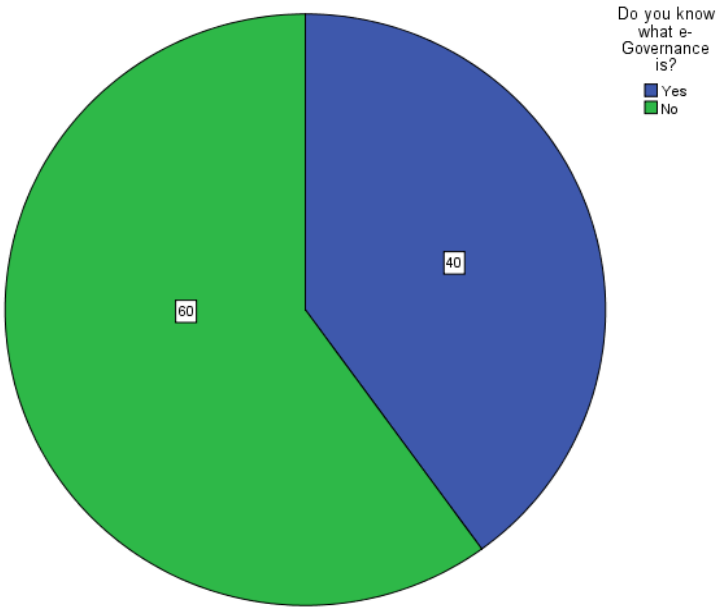

Figure 2. Knowledge of e-Governance of respondents

V. Conclusion And Future Work

The study identified the necessary capacities that directly affect the successful implementation of e-Governance. These are: minimum threshold level of technological infrastructure; human capital; Internet access for all; legal frameworks/ enabling environment, political will and ability to fund the e-Government projects. The research also showed that there is still a vast amount of work that needs to be done before e-Governance can be implemented successfully in Namibia. The government needs to identify and put together a strong e-Governance capacity building programmes in order to compliment what is already being done and equip the nation in readiness for e-Governance. This may include, among others, investing more in ICT infrastructure, educating the people regarding e-Governance, building on the high order technical skills and know-how and securing the necessary funds that are needed to finance the e-Government projects. Furthermore, the Government of Namibia also needs to build a strong legislation surrounding the laws governing e-Government in the country.

The research concentrated around the urban areas particularly the places near the capital city of Windhoek. For future work and for the sake of expanding national development to the needy, this research recommended that the same study be replicated in the other regions of Namibia, namely: Erongo, Hardap, Karas, Kavango, Kunene, Ohangwena, Omaheke, Omusati, Oshana, Oshikoto, Otjizonjupa, and Zambezi. Also, the other future work was to prioritise the ICT penetration in the rural sectors to alleviate the illiteracy levels that hindered the marginalised communities utilise ICT technologies to improve their life style.

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