

WAYS OF IMPROVING IT-DEPENDENT SERVICE DELIVERY IN PUBLIC ORGANISATIONS

¹Faith Nguleni, ²Prof. Emanuel A.M. Mjema

¹Tanzania Public Service College, P.O Box 329, Tabora, Tanzania,

²College of Business Education, P.O. Box 1968, Dar es Salaam

Abstract: This paper presents ways of improving IT-dependent service delivery of public institutions in Tanzania, focusing on Electronic Fiscal Devices Management System used by employees and Electronic Fiscal Devices used by customers of that institution. The main objective that guided the research was, "To establish ways of improving IT service delivery at the Institution. The researcher used descriptive research design. Target population of the research was 19 858 and the, sample size was 586. Research employed convenience sampling and simple random sampling techniques and the respondents were customers and employees of that public institution. Data were collected using questionnaire instrument and were analyzed using descriptive. The research findings exposed different ways that can be used to improve the IT-dependent services provided by the institutions. Some of the ways to improve the performance include: conducting training among customers and employees about IT devices; the promptness of fixing of computer systems whenever there is any unexpected problem; existence of good and clear strategies for improving IT devices' performance; existence of clear feedback mechanism from systems users as well as sufficient documentation of IT devices.

Keywords: EFD, EFDMS, IT-Dependent Service, IT Service Delivery and BTPS.

1. INTRODUCTION

The future of many organizations in any country depends on their ability to link the power of Information Technology (IT) with their business (Schwalbe, 2015). Information Technology has become a very important and useful tool, which operate daily activities that take place within many organizations in order to strengthening the organization's competitive advantages (Ghobakhloo et al., 2012). IT is made-up of hardware and software solutions, which help organizations in gathering, organizing, and analyzing data that enables organizations to accomplish their goals (Kumar, 2014).

IT service delivery is the method in an organization to provide IT services to its users, such as data storage, applications and other many business resources which covers development, deployment, design and operation¹. IT helps the organizations to operate its processes such as marketing, production, human development and also these technologies are used in making accurate decisions, saving time and money (Ahmad, 2014).

In the study of Ivanko (2012), several scholars have attempted to define an organization by stating an organization as, "a conscious human activity of linking and coordinating of the production agents or a technique of combining the processes for a purposeful realizing of the objectives set".

The institution that was as a case study, is an IT-dependent organization established by Act of Parliament No. 11 of 1995, and started its operations on 1 July 1996. In order to execute its IT services efficiently, the institution uses a number of systems including Electronic Fiscal Devices Management System (EFDMS), Online Taxpayer Registration Portal, Tax Return Electronic Filling System, and Revenue Gateway System.

For this study, the researcher used Electronic Fiscal Devices Management System (EFDMS) as one of the system in that institution that provides IT services through optimizing the revenue collection in tax administrations and connects the physical device such as cash registers, fiscal printer or Point Of Sale system with the server of Tax Authorities. It helps tax administration to receive full information in a real time regarding the sales made from a specific fiscal device that belongs to a particular taxpayer². EFDMS enhance transparency in the termination of all receipts reviewed, also help to identify if the service is adequately provided or not and then give feedback whenever necessary³.

While studying ways of improving IT-dependent service delivery in organisations, this has undertaken place in different developed countries; little attention has gone into developing countries. Therefore, this work intends to

²file:///C:/Users/Faith/Downloads/EFDMS%20(1).pdf (visited on: September 2017)

³http://www.dailynews.co.tz/index.php/business/49892-tra-improves-system-to-curb-receipt-forgery (visited on: September 2017)

¹ <https://searchitoperations.techtarget.com/definition/IT-service-delivery-information-technology-service-delivery> (visited on: September 2019)

undertake such a study in Tanzanian IT-dependent service delivery organizations.

2. SITUATIONAL ANALYSIS

Dawson (2007) discussed factors that limit the use of technologies in the organizations such as lack of management support, size of organization, scarce resources, and the innovation history that influences the extent of technology adoption and use in the organization. Also Barzekar and Karami (2014) stated that, "Nowadays organizations live in an active and dynamic environment, which is influenced by internal and external factors of the organization, some external factors affecting the performance of organizations include economic, political, social and cultural". Despite the above studies, little attention has been taken on how to improve some of the factors that affect the IT-dependent services delivery in organization such as human factors, low level of education, low bandwidth, poor technology environment, poor security level and power servers being down in which emerges for the ways of improving IT-dependent service delivery in Tanzanian organizations. Therefore, this research paper explores the ways of improving IT-dependent service delivery in organizations. The research paper intended to identify the ways of improving IT-dependent service delivery in organizations and come up with useful, concrete ways and suggestions, which eliminated the problem.

2.1. Ways of improving IT service delivery in organisations.

There are different ways of improving IT service delivery in organizations. However, it takes a lot of time, effort and money when improving these technologies. Training and educating direct and indirect users who are involved in the service delivery to make them understand the service mission of an organization can be one of the ways of improving IT service delivery (Davies et al., n.d.). Additionally, the provision of regular and excellent customer service training such as computer and telephone skills, telemarketing and the use of technology will help the users. Moreover, the employees in organizations should be motivated because they have an important part in shaping customer's perception in an organization (Githiri, 2015).

At the same time, Ramdas et al. (2012) discussed different ways that can be used to improve IT service delivery in an organization such as organizational structure of interaction for example, having a good plan for delivering services and make it sharable with other clients; and immediately fixing of any unexpected problems that occurs when clients receives services from the organization. Furthermore,

IT organizations should make good and clear strategies that aim to improve IT service delivery. These strategies must be fully considered so that to improve value to the business. In addition, an IT organization should not just keep on implementing the new technologies instead it should demonstrate that Information Technology is an important tool in enabling the improvement of the business⁴.

Further strategies include the use of lower costs IT systems to improve internal IT service delivery, reduction of complexity and costs of sellers, coverage outside normal business hours, -adding person-power so that to help any complex issue that might occur, assessing reliable experts and resource when needed and securing "institutional IT knowledge"⁵.

Moreover, an organization should implement "Software Asset Management (SAM) processes and tools". This will help IT organizations to understand the impact on infrastructure changes in order to reduce service disruptions, to deliver excellence service that across the life cycle of IT, and to improve all integrated and automated workflow processes in order to get effective and efficiency outputs⁶.

An IT service delivery organization must ensure there is an increment of innovation to improve a customer's satisfaction. This will make the users of information technology to get what they really need concerning IT services hence the improvement of services and easy accessibility of IT services to users⁷.

Idris et al. (2013) through their findings suggested that companies could improve their process of customer service delivery when information technology are more invested, employees are being trained time to time and customers are taught the importance of using IT in their transactions.

This research paper based on Information Systems Success Model (i.e DeLone and McLean's 2003 IS success model), which is the theory that describes, identify and explains

⁴<https://www.isixsigma.com/industries/software-it/improving-value-it-service-delivery-process/> (visited on: July 2017)

⁵<http://www.cavunetworks.com/2017/04/improve-internal-service-delivery-cavu-networks-co-managed-service-desk-2/> (visited on: July 2017)

⁶ http://www03.ibm.com/innovation/us/smarterplanet/assets/smarterTechnology/service_management/Improving_Systems_Management_with_Virtualization.PDF (visited on: July 2017)

⁷ <http://www.gavstech.com/improve-delivery-excellence-in-IT-operations> (visited on: July 2017)

the critical relationship of six dimensions of Information System success, namely system quality, information quality, service quality, the system use/usage intentions, user satisfaction, and net system benefits which seeks to deliver a full understanding of IS success⁸ as shown in figure 1.

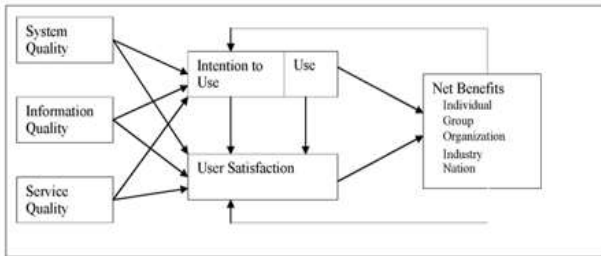


Figure 1: Model of IS Success (Source: DeLone and McLean, 2003)

3. APPROACH

This study used descriptive research design method. The population of the study included all employees and selected customers of the Institution in Ilala Business Region. The total research population was 19,858, whereby 377 were employees and 19,481 were customers.

The sample size was 586 (see Table 1) as determined by using the solvin’s mathematical formula.

Table 1: Sample size of the study

Category	Sample size	Percentage
Employees	194	33.1
Customers	392	66.9
Total	586	100

Sampling procedure

This research paper used convenience sampling to collect data from customers and simple random sampling to collect data from employees of the institution. The research instrument used was questionnaire to collect data from the respondents. For quality of data, the study used face validity by doing a pilot tested on the questionnaires before using it to the whole sample; through distributing six questionnaires to employees and fourteen questionnaires to customers of the institution before distributing to targeted sample whereby the

participants returned all the questionnaires with answers as expected by the researcher. For determining the content validity of questionnaires, the researcher used a supervisor from College of Business Education (CBE) and other experts from Kampala International University in Tanzania (KIUT). Data analysis was descriptive statistics and Statistical Package for Social Sciences (SPSS) was used.

4. FINDINGS AND DISCUSSION

The response rate was 70.1% as shown in Table 2. This response rate is satisfactory for analysis to go ahead.

Table 2: Respondents profile

Categories	Population	Sample size	Response rate
Customers	19 481	392	65.3%
Employees	377	194	79.9%
Total	19 858	586	70.1%

4.1. Profile information

- Respondents’ categories**

The findings indicate that customers occupied the majority of this research with 62.3% compared to employees with 37.7%. This was expected to be so, because the customers are many compared to employees.

In addition in the research the respondents were requested to indicate the year in which they started their interaction with the Institution. As shown in figure 2, the research results indicate that the majority of respondents started their interaction with the Institution between 2012 up to date with 74.7%, followed by respondents who started their interaction with the Institution between 2004-2011 with 16.3% and from 1996-2003 were 9.0% of respondents. This implies that the majority of respondents started their interaction with the Institution from 2012 up to date. This might be because there was an expectation of increment of taxpayers from 2011/2012 to the next five years⁹.

⁸https://en.wikipedia.org/wiki/Information_systems_success_model (visited on: November 2017)

⁹ <http://allafrica.com/stories/201107290791.html> (visited on: March 2018)

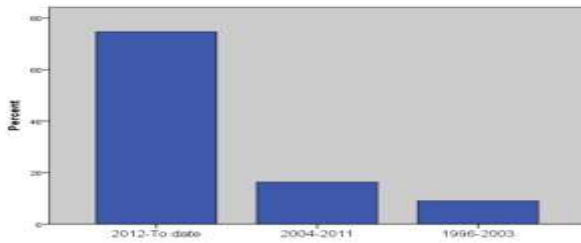


Figure 2: Respondents' interaction year with the Institution

4.2. WAYS OF IMPROVING IT-DEPENDENT SERVICE IN ORGANISATIONS.

The respondents replied to the questionnaire using the five Likert scale as shown in table 3 whereby Strongly Agree (SA) =5, Agree (A) =4, Neutral (N) =3, Disagree (DA) =2 and Strongly Disagree (SDA) =1.

The descriptive statistics (see table 3) regarding the ways of improving IT service delivery; it revealed that the majority of the respondents strongly agreed that there is a need of conducting training among customers and employees about IT devices. The respondents suggested that, conducting training will help both providers and receivers of IT services with a mean of 4.52 and standard deviation of 0.685. This concurs with the findings of Githiri (2015), who noted that when employees and customers are trained, it helps employees to tolerate the needed customer relationships and helps customers to maintain and improve their businesses. In addition, fixing of computer systems immediately as an unexpected problem occurs with a mean of 4.46 and standard deviation of 0.82 also viewed as another major way of improving IT service delivery by the majority of respondents. The findings of the study further show that the majority of the respondents felt that there is a need of good and clear strategies that aim to improve IT services (with a mean of 4.39 and standard deviation of 0.771). The systems feedback mechanisms has to be improved to help the users of those systems to get clear feedback on time (with a mean of 4.22 and standard deviation of 0.834). Furthermore, the respondents felt that when there is enough documentation about IT devices will help in improving IT service delivery because users will read those documents and know how they can handle different IT devices (with a mean of 4.31 and standard deviation of 0.801). However, a substantial amount of respondents (with a mean of 3.10 and standard deviation of 1.316) remained neutral on the statement that the Institution systems' contents are clear no improvement needed.

Table 3: Ways of Improving IT-Dependent Services Delivery

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Statements	SA	A	N	DA	SDA	Mean	Std. Deviation
There is a need to conduct training among customers and employees about IT devices.	60.6%	31.6%	7.1%	0.5%	0.2%	4.52	0.685
Computer systems need to immediately fix when any unexpected problem occurs.	59.4%	32.4%	5.3%	0.5%	2.4%	4.46	0.823
There is a need of good and clear strategies that aim to improve IT devices' performance.	53.8%	34.3%	9.0%	2.9%	0.0%	4.39	0.771
Feedback mechanism from systems needs some improvement.	44.5%	37.0%	15.1%	3.2%	0.2%	4.22	0.834
More documentation about IT devices should be provided	49.4%	34.1%	14.8%	1.2%	0.5%	4.31	0.801
Institution systems' contents are clear no improvement needed.	20.9%	16.3%	27.0%	23.1%	12.7%	3.10	1.316

The study also sought to establish other ways of improving IT service delivery. The respondents gave their opinions as shown in figure 3. The findings of this study show that 254 respondents gave their views that training and awareness to providers and receivers of IT services is required as one of the ways of improving IT service delivery in Tanzanian organizations in order to help both providers and receivers to benefit the services provided by IT. These findings found to be consistent with those of Davies et al., (n.d.) that IT service delivery are improved by training and educating direct and indirect users who are involved in the service delivery to make them understand the service mission of the organization. In addition, the findings show that 229 respondents suggested that systems should be user friendly to be easier for IT service providers in performing tasks, and 222 respondents suggested that IT infrastructures should be improved for better IT service delivery.

The findings, further indicate that 217 respondents gave their suggestion that by improving customer care in organizations, it will help in improving IT service delivery in Tanzanian organizations. By increasing internet bandwidth, computers and system administrators in offices will help in improving IT service delivery as suggested by 210 respondents, and 199 respondents respectively. The findings above found to be consistent with that of Tossy (2014), who noted that it is very important to have the right IT infrastructures such as PCs, servers, a good network bandwidth and stable power supply for smooth implementation of IT resources. In addition, the findings indicate that there is a need for frequent updating of IT devices as suggested by 196 respondents.

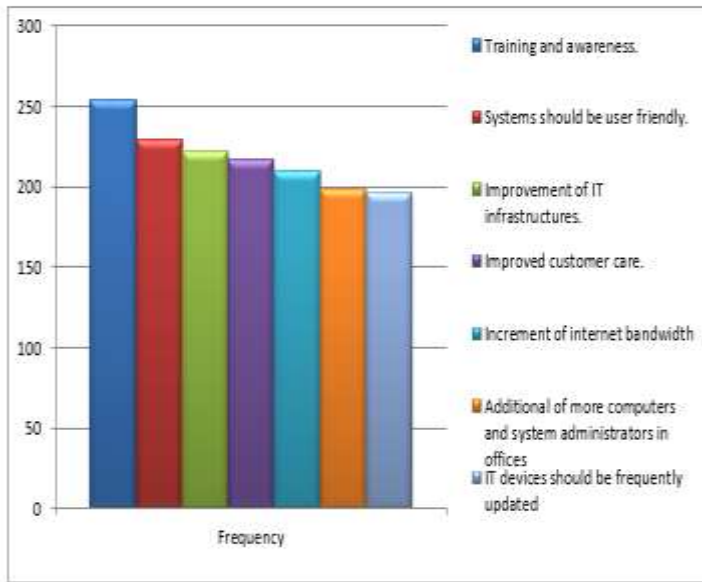


Figure 3: Ways of improving IT service delivery.

Usage of Barcode Tracking Products System (BTPS) as one of the Ways of Improving IT Service Delivery

It is suggested that, the management should introduce a **Barcode Tracking Products System**, which will be integrated with the EFD machines. All products must have the barcode, which has the information of a particular product such as Order Number, Purchase price, Invoice/Purchase Date, Unique product code and Description of a product. EFD machines will contain the current information it has plus Product information from Barcode Tracking Product System. When a customer needs a product, it scans on its barcode and gives all the details of the product whereby when the receipt is given to the customer must also carry all the information as described in the barcode. The aim of this system is to help the management of Institution to collect the correct tax from traders. This is because there is some wrongful or criminal deception done by some traders when selling their products, example someone can buy four products, but she/he receives a receipt written three products and less amount of money compared to the amount given to the trader. This clearly proves that there are some criminal deceptions done by traders and this make the Institution not get the real correct tax from traders. Therefore, by using Barcode Tracking Product System will help the Institution to collect the correct taxes from the trader.

In addition, due to high price of some of the IT devices such as EFD machines, some traders who are supposed to have EFD machines cannot afford them. Therefore, the researcher suggests that, it is better to have a procedure of making sure all the traders who supposed to have EFD machines to have them while paying money in

installments. Moreover, there should be a designed system, which contains the entire list and necessary information for those traders who currently does not have EFD machines. The system should perform the followings:

- Remind the traders to pay for the device either through phone messages or emails as a day approaches to the pay date on every date arranged (for example on the 6th of every month).
- Allow the traders to pay for the devices through their phones using different accounts (for example, using Tigo Pesa, M. Pesa, Airtel Money) or through a bank account.
- Transfer money from accounts of traders on a date of paying for the device if the trader has not paid (this is done if only a trader's bank/phone accounts have money).
- Keep all the payment records of a trader.

In addition, there should be people from the Institution who will be calling the traders through telephones when they are late to pay the dept to remind them to pay for their devices. By allowing the users of IT devices to buy devices in installment, will make a big number of users to use these devices because they can afford them. This, will make many people to use the IT devices to perform different tasks in organizations whereby tasks will be easily and quickly complete due to the use of technologies (IT devices) and increases the use of technologies in Tanzanian organizations as well as development of different sectors in Tanzania.

5. SUMMARY AND CONCLUSION

The main objective of this research was “to establish ways of improving IT service delivery at one of the Tanzania Institutions”. It was revealed that improving the Technology resources is one of the best decision to receive and delivery good and satisfactory Information Technology to its users.

The study established that conducting training among customers and employees about IT devices would make a lot of impact on their quality of IT service delivery to their customers, immediately fixing of computer systems whenever there is any unexpected problem could influence positively on the quality of IT service delivery at the Institution. Also the existence of good and clear strategies that aim to improve IT devices' performance, clear feedback mechanism from systems and enough documentation about IT devices would strengthen quality IT service delivery. Good and well-trained providers and receivers of IT services, clear user-friendly systems, good IT infrastructures, good customer care, strong internet bandwidth, enough computers and system administrators

in offices and updated IT devices would also strengthen quality IT service delivery.

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