ICT APPLICATIONS AND SERVICE QUALITY
OF GOVERNMENT SERVICE

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Abstract

This study empirically investigated six values of (Information and Communication Technology) ICT applications which could wield an influence on the improvement of the government sector service quality in Sri Lanka. The independent variables were the transparency, efficiency, accountability, reliability, staff satisfaction and staff readiness associated with ICT applications. The research model is conceptualized taking into account the positive relationships among the six independent variables and the dependent variable of service quality. The study was conducted in 12 Divisional Secretarial divisions (DS divisions) randomly selected from the North Central Province (NCP) in Sri Lanka, with a sample of 196 respondents. The data were collected through a structured questionnaire. The result of the correlation analysis reveals that four variables of transparency, efficiency, staff satisfaction and staff readiness were significant and positively correlated with the service quality of government service. 46 percent of the total variation of the service quality of government service was explained by the research model. But further explorations are needed to deal with the other values of ICT applications relevant to the service quality in government sector.

Keywords: ICT Applications, e-government, Government service, Service quality

INTRODUCTION

Today, the world depends on technology. Charmonman, and Mongkhonvanit, (2014) states, technologies (ICT) have to be used by all the nations in the world for their socio-economic developments. So that Sri Lankan government too cannot ignore the innovations like Information and Communication Technology (ICT) for their operations and offering services to citizens and ICT has today become an integral and indispensable facilitator in the government service. This sector, inter alia is expected to ensure the provisions of a satisfying service to the citizens. Iqbal (2002) opined that the decisions taken by the bureaucracy, the high ranking officials of this sector have a direct bearing on the quality of service. Iqbal further, commented that the government service in Sri Lanka leaves much to be desired since the tentacles of politics that have spread over the government service sector have incapacitated it from achieving the intended goals (World Bank, 2012). In addition, lack of dedication and the correct attitudinal orientation on the part of the service providers coupled with the absence of adequate stimulus and the non-use of proper technology along with the less attractive remuneration package have created serious setbacks evoking a feeling of despondency among the government servants and mixed feelings of despair and anger among the service-receivers (Bwalya, 2009).

During the last couple of decades both the government sector and the private sector had witnessed a dramatic competition and the steady invasion of ICT has tended to intensify this competition (Tilakaratne & Satharasinghe, 2002). But Withanage (2003) reported that the government sector organizations have not been immune from the revolution that has swept through much of the commercial service sector over the past decade or so. In the private sector, customer's satisfaction and loyalty is secured through high-quality products and services providing value for money to the customer are seen as essential for long term survival let alone long-term success. "Organizations operating in the government sector have also come to realize that not only must they look after their 'customer' but they must also take the opportunity to learn from them in terms of both customer expectations and customer perceptions of services", (Wisniewski & Donnelly, 1996). Bhatnagar (2000) highlighted that service provision alone does not necessarily mean meeting the needs and expectations of the people or satisfaction on their part. Accordingly Kotler and Armstrong (2013), stated service provision should be twinned with quality. This is one of the key and salient objectives sought by governments in public service delivery. Therefore, the major question is the realization of the objectives in the government sector organizations. The role of government administration is crucial in providing a quality government service. As a dynamic field, government administration has introduced changes and new approaches and alternatives along with changing economic and socio-political

environments, on how best to deliver government services (Kamarck, 2007). Organizations operating in this sector – Health care organizations, Local authorities like Divisional Secretary Divisions (DS Division), Police stations, Emergency services and related agencies came to realize in the late Lagos that customer service and quality were critical strategic issues, (Iqbal, 2002).

Sorrentino (2004) stated that the transformation of government services on the basis of the capabilities presented by ICT has produced a new model of e-government. Further, Rainford (2009) mentioned, "ICT is seen as an important tool for improving delivery of government services, making government more transparent and accountable, broadening people participation, facilitating the sharing of information and knowledge among the people and integrating marginalized groups and deprived regions". Further, Karim (2003) has concluded "among the many developments and challenges facing governments today, the most apparent challenge is that arises from the increasing influence of ICT. The potentials are vast and taking the initiative to ride on these opportunities will help governments move ahead at a faster rate in improving service delivery for the public". The ICT is acknowledged worldwide as a tool that could be used to increase the productivity, efficiency, effectiveness, transparency etc. of work (UNDP report, 2012). Every sector of the economy has been motivated to use this technology to make its work effective and efficient and thereby maintain a competitive edge. Sorrentino (2004) stated that the use of ICT has grown remarkably in both the government and the private sector in many parts of the globe and ICT has become a powerful tool in achieving efficiency in transactions and promoting transparency in government activities through internet-based information and databases. It is believed that the service quality of the government service will vastly improve with the advent of ICT.

Monavarian (2007) argued that development of new streams of ideas, i.e. new public management or managerialism and governance, together with development of Information Technology and ICT in the form of E-government and E-administration have led to drastic changes in the delivery of government services. In the Sri Lankan context, Jayakody (2001) argued that the problem is the utilization (or exploitation) of technology. Jayakody stated that according to Ranasinghe's observations made in 1996, "the level of exploitation of ICT is still behind that of the developed nations and innovation, speed; service and quality seem to become the key to achieve success and customer satisfaction through the service delivery in private and government organizations. Another issue has been pointed out by Rainford (2009) is failure of e-government. Haneefa's (2007) findings give strong support to the research problem. Through the analyses he has revealed that though the offices have hardware, software and communication facilities to some extent, ICT based resources and services were not

reaching the users to the expected extent. According to Haneefa, though organizations have adopted to use ICT, it will not directly lead towards exceeding of customer expectation or service quality. To overcome the above mentioned issues and problems associated with government services, the government of Sri Lanka recently introduced ICT applications and Systems developed by the SLIDA to government offices especially for all DS Divisions in the country. Even though the government spends more on development of ICT infrastructure and ICT applications to government offices, still there is the uncertainty whether the people are getting quality services from government organizations and there is a contradiction with ICT applications and government service quality. Since there was a contradiction, researcher was encouraged to carry out an empirical study related to the research question "how ICT applications affect the improvement of the service quality of government services in Sri Lanka?" Following objectives frames the present inquiry.

1. To identify whether the ICT applications have improved the quality of service offered by DS Divisions to people.
2. To provide some motivating and encouraging factors for policy makers to go further enhancements towards improving the service quality of the DS Divisions using ICT applications.

By identifying the significance of the above mentions values of the ICT applications, it would be able to get an idea, especially government to go with follow up actions and to get an idea about the fund deployed for ICT development in government organizations. The outcomes will help to policy makers to streamline their decision on relation to ICT investment. People also can understand the potentials of the role of ICT in government sector.

This paper is organized into six sections, including the foregoing introduction. Section 2 explores relevant literature support. Section 3 presents research methodology. Section 4 is devoted to explain result and discussion. Conclusion is offered in section 5 and finally section 6 focuses to limitations and future research directions.

LITERATURE REVIEW

This section briefs the literature of prior researches, thoughts on ICT applications, service quality, and the findings on improvements of service quality in government service due to the adoption of ICT applications. Research focusing on services is growing rapidly. However there are still unexplained phenomena that need to be investigated. A literature review of previous research, both theoretical and empirical research findings and related knowledge are required to be identified how ICT applications react to service quality. Many researchers have focused on

how to improve provider's service quality and how to attract and maintain customers (particularly with the use of ICT applications). The services are inherently variable in how they are conducted. So the problems like "Service Quality" will be occurred.

Bakhtiari (2007) noted government services can be considered as high quality and excellent if a high degree of satisfaction has been received by people as well as people consider government services as high quality if it is easy to find out, simple to use and responsive to their needs. However, Teicher et al. (2002) stated that in the previous years, government organizations had paid little attention to service quality or responsiveness to clients. In this competitive world, people expect quick services and they do not expect to give same information multiple times and go here and there to get works done. People think this is waste of time and money. Bhatnagar (2000) has pointed out that ICT applications focus on automating the process of delivering services to citizens and it brings transparency. The use of ICT can shorten queues and waiting times at collection counters, improve accuracy in billing and accounts receivable and provide immediate proof of payments to citizens. As Iqbal (2002) pointed out that the government service of Sri Lanka is in a pathetic view, because the incessant political interference. Besides this, the lack of proper training, dedication, attitudinal orientation, absence of adequate motivation, not using proper technology and, last but not least, inadequate remuneration, are contributory factors. When the government service fails to perform a good service, the people's feelings on the service of the government become passive. Daily Mirror, (2007) reported that "This is a wonderful opportunity for government, ICT champions to learn from international expertise, as well as share their experiences". Withange (2003) stated that e-Government is all about citizen-centric governance and it was started under the e-Sri Lanka programme. With this, government sector is started to modernize and public administration also begins to reforms with ICT applications. These changes cause to improve the government service.

For the study, researcher's intention is to examine the how ICT applications cause for improving service quality of the government service. Through the prior studies, researcher found four models which used to measure the service quality; (Parasuraman's SERVQUAL (1986); Gronroos' Dimensions, (1990); Gummesson's Dimensions, (1990); Abdullah and Ahmad' model (2001)). From SERVQUAL model, reliability was taken. Hence, reliability is secured with ICT (ICT Policy, 2005). In the Gronroos' Dimensions, Attitudes and behaviors match with Staff satisfaction with Information Technology in Abdullah and Ahmad's model. Gummesson's Dimensions, the software or information technology elements can be considered as one factor, cause to service quality and this has been proven in the Abdullah and Ahmad's model with Application of Information Technology. Therefore above mentioned models alone cannot be

taken to examine the particular research problem. There is some agreement that ICT would make service quality improvement (Abdullah, & Ahmad, 2001). Hence by considering all, Transparency, Efficiency, Accountability, Reliability, Staff satisfaction and Staff readiness with ICT were considered as contributory factors for improving service quality with ICT applications.

ICT based systems improve the transparency by allowing the people to monitor the mandate of the organization, functionality, decision making process, the progress of a process at different stages and clearly informing them of the type and the quality of the service they obtain (ICT Policy, 2005). Public services in most of developing countries are in an unsatisfactory mode. One of causes for that is less transparency, but applying ICT can improve the transparency and avoid unsatisfactory (Shadrach & Ekeanyanwu, 2003). Bhatnagar (2000) emphasized that the transparency will be brought due to the adoption of ICT and further emphasized transparency improves the quality of services. E-governance and e-government can improve access to government service and so it increases transparency in government service (UNDP report, 2012). This report also has proven that service quality is improved positively with high transparency (Ancarani, 2005). Sopchokchai (2002) also noted that use of ICT applications for good governance leads to make transparency, increase efficiency in government sector services and transparency and efficiency improves service quality. Punchihewa (2007) too has emphasized that effective utilization of ICT in government institutes would improve transparency. Further he described the transparency as clearness of the activities for task. Rainford (2009) stated the "ICT is seen as an important tool for improving delivery of government service and making government more transparent. Stephan and Ryul (2013); Grönlund, et al. (2010) and Sturges, (2004) highlighted that it can be improved transparency by using ICT then improve service delivery. Further, they emphasized making right information available leads for improving transparency. Sandberg and Sandberg (2004) highlighted particular government information should be accessible to every citizens. Hence this will increase transparency and quality of the services (Haque, and Pathrannarakul, 2013; Bhattacharya, 2012). Singh and Singh (2011) pointed out that in developing countries one of purposes in e-governance is to ensure the transparent; as well as Wickberg, (2013) noted that ICT applications can be used to endorse transparency. Transparency is defined as visible decision making and it is open to people, when a task is performed by a government official, it can be visible to service receiver and it will build corporation with officials working together for a common task (Haque, and Pathrannarakul, 2013). When the transparency is there, the process is transparent for all, this make people happy. Because people know how it happen, what the time takes and process for the task to be completed etc. so this will cause to improve the quality of the government services too.

This concept requires negotiations and agreements to be openly arrived at and openly presented so that all can know and understand the process and terms (Boyoung & Jung, 2001). Accordingly, for the study, transparency is measured with three dimensions, trust of the process, visibility of the service and availability of information. Grounded on the aforementioned arguments, the following hypotheses can be proposed.

H_1- Transparency with the ICT applications improves the service quality

Punchihewa (2007) reported that through the ICT applications, efficiency can be achieved; it leads towards improvement of service in various aspects. The same idea has been pointed out by Fadun (2013) and he expresses this cause for quality of service delivery. Ancarani, (2005); Kowalkowski, (2008) and Pathak, et al. (2010) noted that ICT cause to enhance efficiency and it leads to improve service quality. Services should be available to the people within the minimum possible time. A concept popular in e-government solutions are "Same day service" where a service requested by a citizen in the morning should be made available to him or her before the end of the same day. Although it is difficult to expect this level of delivery from every service from the inception, all government organization are expected to provide their services efficiently so that the people are not made to wait for the services requested and it leads towards the improving quality of the services (ICT Policy, 2005).

The United Nations (2012) also, has noted that the efficiency of service delivery will increase due to ICT applications. If the time is less to perform a task, efficiency can be achieved. Asgarkhani, (2005) highlighted that using ICT applications, tasks can be performed within short time, so that efficiency is there. Gupta et al. (2008) have made sure of this correlation in their article; "Adoption of ICT in a government organization in a developing country: An empirical study". Being efficiency without wasting time is important for all and further they have pointed out that with the efficiency due to ICT applications, quality of the services can be enhanced. As per identified literature relating to efficiency raised by ICT applications, it can mention that if ICT application use for offering services, efficiency can be expected and this influence the quality of services offered. For the study, efficiency is defined as providing services within minimum possible time with two dimensions namely quickness and completeness. On the basis of the above evidences, this study proposes:

H_2 - Efficiency with the ICT applications improves the service quality

The accountability is one of major pillars of government service. Most of the developing nations face less accountability situations. But this can be changed and accountability can be improved with ICT applications (Ray, 2012). The level of the accountability is determined on the

availability of information; so that information should be made available to use (Sandberg, & Sundberg, 2004). Ray, (2012) further highlighted technical factors of reliable technology, easy access and multiple access points create more accountability. Winthereik et al. (2007) pointed out that the accountability is the obligation to demonstrate and take responsibility for performance in the light of commitments and expected outcomes. In government, accountability can be thought of as enforcing or explaining responsibility. It is often used as a synonym for "responsibility" because both are defined by the office holder's authority; they cover the same ground. At the same time Winthereik et al. (2007) described if government organizations have the accountability raised with ICT applications, this causes for enhancing quality of services. According to Bill Tod, accountability is a powerful tool for improving service quality. Joshi, (2013) posits that accountability has strong impact on public service. Government organizations should be accountable towards the citizens and for the services provided so as to foster confidence regarding quality of service for citizens in the use of such services and in interacting with government organizations (ICT Policy, 2005).

There is a positive relationship between the ICT and accountability of government activities. This has been proven in the United Nations (2012). Same association has been emphasized by Gupta et al. (2008) and pointed out a positive association between accountability and service quality. Monfardini (2010) has shown that accountability can be enhanced with the capabilities of ICT. Further they reported the concept of accountability describes the rights and responsibilities that exist between people and the institutions that affect their lives, including governments, civil society and market actors. Above evidences found from prior studies give strong support to build an argument like high accountability occurred with ICT applications improves service quality. In practice, accountability can take a number of forms, depending on the institution in question. In general, relationships of accountability have two important components: Answerability (the right to get a response and the obligation to provide one) and, Enforceability (the capacity to ensure an action is taken, and access to mechanisms for redress when accountability fails). Hence in this study, accountability is defined with two dimensions, trust of the internal respondents towards the responsibilities of the ICT applications and confidence of internal respondents towards the ICT applications. Based on the above evidences, following hypothesis is proposed.

H_3 - Accountability with the ICT applications improves the service quality

Parasuraman et al. (1986) defined that the reliability as the ability to perform the promised service dependably and accurately under stated conditions for a stated period of time. Reliability

is now often taken to include resilience. The reliability is one of factors in the SERVQUAL model and in their study, they have pointed out the reliability is positively related to service quality.

ICT Policy (2005), noted as reliability refers to the consistency of a measure. A test is considered reliable if we get the same result repeatedly. For example, if a test is designed to measure a trait (such as introversion), then each time the test is administered to a subject, the results should be approximately the same. Unfortunately, it is impossible to calculate reliability exactly, but there are several different ways to estimate reliability. But Eze et al. (2008) have defined reliability as "refers to the trust to institute's ability of performing service in a proper way, such as acting according to promises and declarations" and they have pointed out a positive association between reliability and service quality. Identified literature relating to reliability, reliability is defined similar to Parasuraman with three dimensions namely dependability in handling customer's service problems, performing services right the first time as promised and maintaining error free records. On a basis of the above evidence, this study proposes:

H_4 - Reliability with the ICT applications improves the service quality

Magnusson and Hanson (2004) has pointed out that the officers who are engaged in activities related to ICT will be encouraged and motivated to do their work in office with free feelings. Obviously that leads to improve service quality in government organizations. Staff satisfaction is a measure of how happy workers are with their job and working environment with ICT. Keeping morale high among workers can be of tremendous benefit to any company, as happy workers will be more likely to produce quality service.

According to Koning and Gelderblom's (2006) findings, compared with the younger workers in an office, older workers make less use of ICT in their job, use less complicated applications and have more difficulties in using ICT. This implies that adoption of ICT to an office will change the working pattern, behaviors and the mind of the people who directly accept the new technology. Therefore when services are delivered to end users, these workers will react to the customers with a free mind, happy mode, polite manners etc, directly causing an improvement in the service due to ICT. The same has pointed out by Abdullah and Ahmad (2001) and he further, mentioned the healthy workers are more productive, can render their services better than others, fewer work-related accidents and illness lead to less absenteeism. In turn, this results in lower costs and less disruptions to the production processes. Equipment and a working environment that are optimized to the needs of the working process and that are well-maintained leading to higher productivity, better quality and less health and safety risks due to computerization of work through information systems. Therefore this study is concerned; staff

satisfaction is defined with four dimensions of attitudes, authority, beliefs and motivation. Drawing a conclusion from the above arguments, this study proposes the following hypothesis.

H5 - Staff satisfaction with ICT applications improves the service quality

Abdullah and Ahmad (2001) have stated as staff readiness is the affective state of the employees with respect to the adoption, use and applications of ICT in the organization and their ability and willingness to use this tool in their respective work areas. This is more than just training or having the requisite skills or knowledge. It is an interactive combination of both the cognitive and affective state as it relates to ICT. The construct, however is more inclined towards the affective than the cognitive. The concept of training for skills is much more limiting than is necessary to capture the staff's willingness to embrace this resource in their work. Further through their study, it has been confirmed that the staff readiness is positively related to service quality. Mathur (2009) also has pointed out that staff readiness for the technology leads for improving the services delivery. Accordingly, for this study, staff readiness is identified with four dimensions namely ability to capture new technology, willingness, training and knowledge. Accordingly following hypothesis proposes.

H6 - Staff readiness with ICT applications improves the service quality

Service quality can be defined as the extent to which a service meets the expectations of customers. Zeithaml et al. (1990) considered that judging the services quality is solely done by the end customers. Lewis and Boom (1983) stated service quality is a measure of the degree to which the service delivered matches customer expectations, Same idea has been mentioned in Eze et al. (2008)'s study. Parasuraman et al. (1986) tool described service quality as "the comparison between customer expectation and perceptions of services". Further, they have mentioned normally customers compare their expectation with the perceived outcome. Delivering quality service means conforming to customer expectations on a consistent basis and meeting customer satisfaction. Therefore for this study, service quality is defined with four views namely peoples' expectations, perceived expectations, impression of the quality and perception of ICT for improving service quality.

More ICT is better, but perhaps only to certain point (boundary condition). Though, there are so many antecedent conditions which grounds for service quality, with above literature supports, researcher consider discussed all values of ICT applications (transparency, efficiency, accountability, reliability, staff satisfaction and staff readiness) are related for improving service quality. Hence researcher developed a separate hypothesis to represent the whole research model.

H7 - ICT applications improve the service quality of government service

METHODOLOGY

Sekaran (2003) has mentioned that a research can be done following the five steps which are deducting a hypothesis from a theory, expressing the hypothesis in terms which propose a relationship between specific variables, testing the hypothesis, examining the outcomes, if necessary modifying the theory in the light of the findings. An extensive review of the literature dealing with the investigation suggests that Transparency, Efficiency, Accountability, Reliability, Staff Satisfaction and Staff readiness for ICT applications have a significant influence over the service quality of government service. As an outcome of this review, the conceptual framework and seven hypotheses was derived. Figure 01 illustrates the hypothesized relationship between the variables. 196 respondents who were selected from 12 DS Division in Sri Lanka provided the data for the specific structured questionnaire used in the survey. The questionnaire basically contains questions relating demographic information as well as five point likert type questions which focused on key research variables.

Figure 1 – Conceptual framework
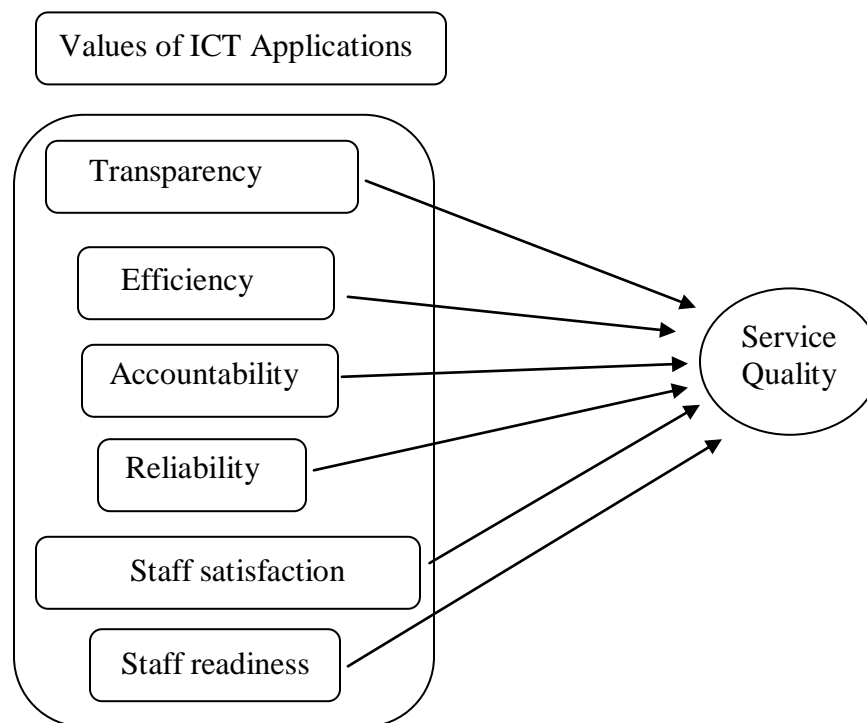
The target population for the research was the internal and external customers who get services from the 29 DS Divisions in the North Central Province (NCP), Sri Lanka. Having considered all 29 DS Divisions, as all 29 DS Divisions are homogeneous, DS Divisions are providing similar

services and no considerable differences in socio-economic, culture and people's behavior (NCP statistics, 2008). Hence, simple random sampling technique was used to select 12 DS Divisions out of 29 by giving equal chance to be selected into sample.

Two types of respondents were used to collect data; Internal respondents – Government officers employed in the relevant DS Divisions and External respondents – the people who obtain services from DS Divisions. When selecting external respondents, researcher considered their age (above 20 years of age) and whether they have some past experiences of the DS Division's services. It was expected to have approximately 200 respondents both internal and external by giving equal number to both respondents from each DS Divisions. The collection ended up with 196 respondents. Table 1 show clearly the sample composition and sample size.

Table 1 - Sample Profile

DS divisions	No. of Internal Respondents		No. of External Respondents		Total
	Male	Female	Male	Female	
Rambewa	3	5	6	2	16
Mahavilachchiya	4	4	7	1	16
NuwaragamPalatha East	5	3	6	2	16
Kekirawa	1	7	6	2	16
Palagala	1	7	4	4	16
Thalawa	7	1	5	3	16
Rajanganaya	5	3	6	2	16
Thambuttegama	6	2	6	2	16
Mihinthale	4	6	7	3	20
Hingurakgoda	6	2	6	2	16
Elahera	2	6	5	3	16
Lankapura	5	3	4	4	16
Total	49	49	68	30	196

In data analysis, descriptive statistics, correlation analysis (Pearson's correlation), Multiple regression analysis were employed. All analysis was carried out through Statistical Package for Social Sciences (SPSSv16).

Sekaran (2003) noted information regarding validity and reliability is in order to determine whether instruments are stable and accurate and whether they truly measure what they set at to measure. Further, Sekaran mentioned that reliability of the survey instrument is the consistency of a measurement or the degree to which an instrument measures the same way each time it is used under the same condition with the same subjects and one common way of computing correlation values among the questions on a instruments is by using

Cronbach Alpha. As Table 02 shows, each variable has received alpha value well over the general cut-off value of 0.7 (Hair et al. 2006).

Table 2 - Reliability statistics

Antecedents	Cronbach'salpha
Transparency	0.725
Efficiency	0.814
Staff Satisfaction	0.812
Staff Readiness	0.803
Reliability	0.830
Accountability	0.798

Validity is the strength of research conclusions, inference or propositions. Cook and Campbell (1979) defined validity as best available approximation to the truth or falsity of a given inference, proposition or conclusion. Following procedures and design techniques also were used to reduce error to ensure internal, construct and statistical reliability and to maximize validity.

To enhance the reliability of the instruments used, material was pre-tested in the survey development stage. As a result of the pilot study, minor changes were made in the instruments. For the clarification of the research question, prior to the study, a pilot survey was conducted to make sure whether the people are aware about the ICT, its usage of government offices when people are being received government service and their feelings of the government service. 30 people were interviewed through simple 6 open ended questions. It was able to identify that 67% of people generally know about computers. 47% of people has experienced the benefits of ICT from government offices specially DS Divisions. 73% of people mentioned that even the ICT applications in government office ease the works and receive services through the technology, people could not be satisfied. Out of 30 respondents, 33% people does not know computers and really haven't experience of the benefit of ICT.

EMPIRICAL RESULTS AND DISCUSSION

Since the emergence of ICT applications in government sector, many studies have done in different angle addressing unequal issues. This empirical study has verified that ICT applications improve service quality to some extent. Accordingly, correlation analysis which was performed to examine the relationship between different values of ICT applications which are Transparency, Efficiency, Staff Satisfaction, Staff Readiness with the Service quality of the government service reveals that each of predictor variables positively relates the service quality ($r_1=0.341$, $p_1<0.001$; $r_2=0.547$, $p_2<0.000$; $r_3 =0.284$, $p_3<0.005$; $r_4 =0.248$, $p_4<0.014$). Thus four hypotheses of the study are supported and accepted.

It was revealed that transparency value of ICT applications improves service quality. According to the literature evidence, identified relationship has confirmed in this study. Visibility of the process, availability of the correct information in right time and accessibility are important to make transparent. With the capabilities of the ICT applications, it can be achieved and maintain the transparency in government service delivery process and it leads for quality service. People expect to obtain services within a minimum possible time and do not like to give same information repeatedly for different places. In a competitive and complex environment people do not have time to wait in queues for long time. Due to ICT applications, government officers are able to offer services within a minimum possible time. So that efficiency could have been able to maintain due ICT applications. People like to work in a pleasant environment. Happy workers will be more likely to produce quality services. By adopting ICT into government offices, the working environment will be pleasant. This motivates people to work with free mind and happy mode. If the working people are satisfied, they offer services happily, so that qualities of services improve due to adopting ICT applications. When introducing ICT applications, people who are working should accept it and ready to use. If not, the investment on ICT applications will be useless and occur big lost. So that staff readiness for ICT applications is very important in working environment. Ready people absorb the technology quickly and make use for offering quality service to people. Result of the present study has revealed the importance of this aspect of ICT applications. Accountability and Reliability variables are not supported (r_5 =0.220, $p_5<0.030$; r_6 =0.120, $p_6<0.240$).

Though, literature evidence supported to the relationship between accountability with ICT applications and service quality, in this study results show that there is no significant relationship with two factors. It should be paid more concern about technical factors of reliable technology, lack of easy access and lack of multiple access points, lack of trust and lack of confidence towards the ICT applications. The results show that reliability with ICT applications does not cause to improve service quality. When functioning ICT applications, this value is crucial. Inability of performing services right the first time people expect, poor handling customer service problems with technology and technology maintains problems affect to go down the reliability value of ICT applications. So that it reduce the service quality also. Except the Accountability and Reliability; Transparency, Efficiency, Staff Satisfaction and Staff Readiness are positively correlated with the service quality of the government service offer from DS Divisions.

Table 3 - Multiple Regression results

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	Beta	Std. Error	Beta		
(Constant)	.651	.534		1.218	.226
Transparency (T)	.197	.058	**.282**	3.365	**.001**
Efficiency (E)	.263	.049	**.445**	5.377	**.000**
Accountability (A)	.008	.073	.013	.116	.908
Reliability (R)	-.051	.072	-.081	-.704	.483
Staff Satisfaction (SS)	.215	.082	**.266**	2.611	**.011**
Staff Readiness (SR)	.232	.090	**.204**	2.587	**.011**

Multiple regression analysis was carried out to determine the overall impact of the predictor variables on service quality. Results were summarized in Table 03. According to the results, four antecedent conditions of Transparency, Efficiency, Staff Satisfaction and Staff Readiness are positively affected for the dependent variable whereas the other two antecedent conditions of Accountability and Reliability are not significant. Thus the above tested hypotheses are supported with the results of multiple regressions. Reliability with ICT applications has negatively caused to dependent variable of Service Quality. Even though the independent variable of Accountability is not significant, there is a positive relationship between two variables.

Table 4 - Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.676(a)	**.457**	.421	.26963

Table 04 shows the R Square value (0.457). According to the R Square value, the research model explains 46 percent of the total variation of the dependent variable of Service Quality. As well as results indicates that 54 percent of the total variation of the dependent variable of Service Quality is explained by other variables.

Table 5 - ANOVA of multiple regressions

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.566	6	.928	**12.760**	**.000(a)**
	Residual	6.616	91	.073		
	Total	12.182	97			

The results of the Table 05 indicate that the used model is significant, F (12.760), P (0.000).The results of the multiple regression analysis explain that the Quality of the services provided by DS divisions has been improved to some extend due to the ICT applications.

CONCLUSION

To account the stated primary objective, six aspects of ICT applications; Transparency, Efficiency, Accountability, Reliability, Staff Satisfaction and Staff readiness were identified to evaluate the effect of ICT applications towards the improvement of service quality of government service. Results revealed that four variables of Transparency, Efficiency, Staff Satisfaction and Staff Readiness cause for improving service quality of government service. The variables of Accountability and Reliability were not supported. Accordingly these two antecedents are not related to improving service quality.

The result of multiple regressions explains that 46 percent of the variation of service quality is explained by Transparency, Efficiency, Staff Satisfaction and Staff Readiness. The individual coefficient for Accountability and Reliability are 0.013 and -0.081 respectively and are not significant. Therefore it can be concluded that the accountability with ICT application insignificantly influence the service quality while reliability with ICT applications negatively influence the service quality. Hence it is worth to take hand some promotional campaigns and develop stable ICT applications to improve the influencing factors further. On the other hand, it should update the ICT applications and related facilities regularly. Giving regular training to keep employees abreast of the current innovations also should be taken in to consideration.

Considering overall results of multiple regression analysis, it can be concluded; the four values of ICT applications contribute for the improvement of the service quality of government service in Sri Lanka (while 54 percent explained by other unknown antecedent conditions). Thus, there are substantial potentials to encourage and further improvements of the service quality of government service with ICT applications.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Study was limited to one government institute calls DS divisions in NCP. But the research can be expanded to include other government and semi government institutes such as urban councils, municipal councils, postal services, railways, hospitals and police stations which provide services directly to the public. Not only ICT applications but also other antecedent conditions cause for improving service quality. Nevertheless for this study, researcher focuses only the values raised with ICT applications which cause directly or indirectly to improve service quality in government sector. It is worthwhile to note that to provide a better generalization; it

should consider more new aspects like structural changes of the physical office room environments with the adoption of ICT, perception of people who use new technology and nature of the ICT applications, privacy and security etc.

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