

Quality Improvement of Public Sector Services by Process Documentation

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Abstract

Public or governmental organizations are beset by the basic issue of providing an ideal efficient quality and more cost-effective services. However, since the public organisation's activities in are effected within the administrative regulations, the staff of the sector do not seek people's satisfaction. Nonetheless, most significant techniques organizational processes can be improved via different techniques including continuous improvement, benchmarking, and process reengineering. The basic step to improve such processes is to create a uniform methodology of activities to solve situations. This step is termed Process Documentation. This research attempts to assess the significance and impact of process documentation on promoting the quality of public sector services, with respect to the executive organizations in Zahedan district. The applied\descriptive research approach has been used for all the public sector executive organizations in Zahedan district. The approach taken is of the correlative and population type. 402 cases have been selected simply by means of random sampling while the Spearman Test has been used to evaluate assumptions of the research. The research findings confirm that process documentation has a significant relationship with all dimensions of service quality in public sector.

Keywords: Quality, Public Services Quality, Process Documentation, Processes.

1. Introduction

Public organizations of Iran are confronting various problems including lack of harmony, absence of executive integrity, and delay in execution of jobs, tangibly affects the services quality and clients' satisfaction. One important reason is the functional approach of organization since establishment. Ignoring improvement of service quality over the recent years, problems intensified, leading to urgency to review service provision. From an experimental point of view, these processes can be improved by means of different important techniques viz. Continuous Improvement [1], Benchmarking [2], and Process Reengineering [3]. A basic primary step for improvement of such processes is to create in the current situation; common approach for undertaking relevant activities [2] termed Process Documentation [4]. "Documentation" is an official method that establishes a methodology for different beneficiaries. An obvious

function of this method is to understand the beneficiaries' intentions, provide stability and consistency of measures, initiating improvement measures. In Iran during the recent years, documentation has been used as an efficient tool for implementation and maintenance of different systems particularly the quality management systems [5]. This measure is always highlighted by international organizations such as ISO, as basic step to improve the said systems [6]. In organizational evaluation and improvement projects, documentation is time-consuming, sometimes involving 70% of the whole project time [7]. Process documentation, in the public sector, will result in proper realization of the processes paving the way for improvement. In Zahedan's offices during 1989 to 2005, documentation of service quality is one of the projects implemented, involving amendments to sections of administrative systems on identification for temporary improvements. In the old revision and improvement methods, normally tasks related to an organizational position or

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department were separately analyzed, and methods were adjusted made by deleting some steps during task accomplishment, such as reducing the transportation time so that speed and accuracy of tasks could be achieved. Viewing the significance and position of methods documentation, the current study attempts to assess the impact of process documentation on the quality of public sector's service.

2. Process Documentation

Documentation is to record (write down), collect, edit, compile, classify, maintain information and concepts, necessary for accuracy of the targeted, activity. In other words, documentation is to establish a documentary relationship for achieving targets by actions for an activity or a set of activities, involve the following measures: organizing intended activity or activities in view of target(s), defining at initial stages of each activity the executive solutions and necessary actions (in terms of planned decisions), approving the activity by the competent authorities, while the relevant organization and resources required to enforce the activity are already identified and appointed, and forecasting/identifying the positive or negative impacts of activities. As a matter of fact, documentation focuses on preservation and maintenance of information. Accordingly, the common objective of documentation measures is to record parts of human knowledge and information in writing [8].

Process documentation scope has two extremes. On one hand, documentation of one process could be assumed as independent from other processes. Form this viewpoint, a line demarcates between the process in question and the other processes. This approach is applicable in small organizations, since the impacts of processes' on another could be estimated. On the other hand, simultaneous documentation of all the core processes is necessary for which, initially a general perspective of processes and their relationship is provided, and then each part of the processes is assigned to different individuals to extract the processes' details. Using this method could be effective in learning the relationship among the core processes as also in processes prioritization [2]. Of course, there could exist different combinations between the said extremes. In both situations, there are certain factors involved such as the size of organization, number of existing processes, dispersion, complexity, interaction of processes, type of the organizational processes (like intra- or extra-organizational processes, production processes, and service delivery processes), clients' expectations, and qualifications of the staff.

In both approaches, identification of the **Core Processes** is the prerequisite for starting the documentation. Some such process of identification and documentation methods are briefed below:

- **Porter's Model:** This model is used as a tool for processes macro-identification. Porter's Model is generally oriented towards the organizational targets, and distinguishes the core process from the supporting ones. The major advantage of this model is to reinforce the process approach in the whole organization; however, it is unable to identify the units involved in the processes. Therefore, correlated communications plan are to complement this model to provide a better perspective of the organization.
- **Communications Plan:** Sometimes, process macro-documentation requires communication between certain units like clients and providers who are involved in process execution. Communications Plan could be applied for the purpose of establishing the said communication, simultaneously spelling out the relationship of different units, organization departments, and beneficiaries in the process.
- **Flow Diagrams:** A graphic picture of the action-flow chart in a process serving different types of simple, multi-functional, and multi-level diagrams. The simple flow diagram shows how to perform actions in a process, based on using signs to demonstrate the actions and their relationship.

Based on relevant studies, major reasons of ignoring documentation in Iran include absence of appropriate documenting standards for management information systems in Iran, heavy expenditure on documentation, the required time for documentation, and the pressure exerted by on the software providers by the users for delivery of the relevant software [9].

Process documentation tools in the public sector being mostly manual tools, are subject to limitations due to wide spectra of processes in the public sector. Process documentation softwares are the appropriate solutions, since they can process documentation with higher speed, more accuracy, and predict details. Currently, various softwares have been provided for documentation one of which namely, SIMPROCESS, First Step, Flow Model 0.2, IBM Business Process Modeller, etc. Like the other specialized softwares, choosing a good documentation software for process documentation in the public sector requires

evaluation of relevant features. These features mainly include applied characteristics, software and hardware properties, capabilities for simulation, analysis, integration, and modeling [10]. Based on feasibility to evaluate the capabilities of process documentation, service quality of softwares in the public sector, conceptual model of current research has be drawn up as in Figure 1. This model can become operational.

3. Service Quality in Public Sector

Baed on the nature and form of services, different quality is necessary for public sector. In fact, since client is not well-defined, quality dimensions should be defined separately. Review of literature related to quality management in public sector indicates that theorists such as [11] have presented different dimensions for establishment of comprehensive quality management in public sector [11] and also believes that the main issues of service quality in public sector include the absence of competitors and quantification of services. There are two reasons of the public sector existing in a non-competitive situation: 1) Governments does business high-risk and/or strategic in certain fields, wherein the private sector is either not interested or cannot invest since the very specific nature and require huge financial resources. and 2) The public sector is not supposed to compete with the private sector; on the contrary, by means of appropriate policies, help it to grow, allowing the public sector to spend more time on major and higher levels tasks. Some dimensions of service quality in public sector addressed by certain scholars are briefly reviewed as follows:

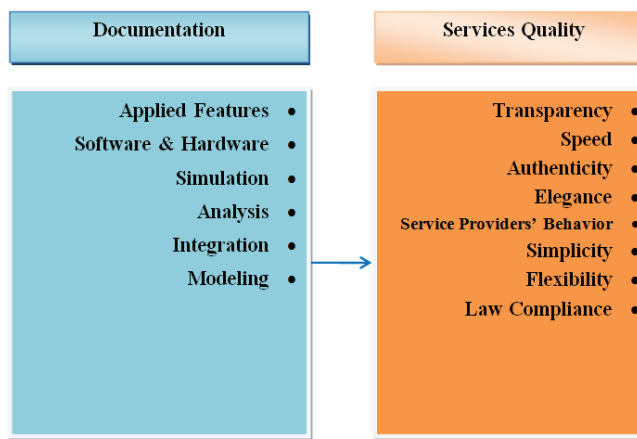


Figure 1. Proposed Model for Documentation's Impacts on Promotion of Service Quality in Excutive Organisations.

Table 1. Proposed Dimensions for Services Quality in Public Sector

No.	Scholar	Proposed Dimensions
1	Garvin (1993)	Transparency, speed, authenticity, elegance, service providers' behavior, law compliance, simplicity & easiness, flexibility
2	Smith (1994)	Modesty, conciseness, integrity, clarity, correctness, observing, cleanliness
3	Jayson (1998)	Speed, politeness & courtesy, easy-going manner & cleanliness, friendly manner
4	Murray & Atkinson	Guaranteeing authentic and proper services, cooperation & empathy, consistency & stability of services, accountability
5	Sengh (1998)	Availability, establishing faster and easier relationship, maintaining the relationship, relationship quality, integrity & honesty
6	Dewhart, <i>et al</i> (1999)	Senior management support, relationship with customers, relationship with providers, human resource management, staff behavior, process flow management, quality and reporting data, Quality section's role, indexing
7	Parasoraman (2000)	Tangibles, reliability, accountability, confidence, commitment

Service quality has led to ideal achievements for the private sector, while the public sector has realised the significant point that provision of good quality services result in public satisfaction and increased participation in the social scenes 13. The main difference between quality of services provided in the public and private sector is that public sector service quality is not oriented and lacks commitment. whereas the private sector's service provider is concerned about service objectives intended for the client or probability of a discontented customer not seeking services again. There are at least three major trends which prevents organizations to speed up their improvement cycle. These trends include *acceleration in the rate of changes, involvement of the whole organization's system in improvement plans, strategic approach to the organization's improvement plans*. In customer-oriented organizations, standardization of processes and services is very important to attract and retain a customer and results in increase in quality level of services [12]. Major differences between service delivery in public

sector and product sale in private sector include 1) In the public sector, services are usually provided to citizens are unlimited, and not monitored by the managers, 2) Services provided in this sector cannot be always be inspected and recalled, 3) The public sector customer's understanding is affected by the service provider's behavior, and 4) Services in the public sector are provided at a generalised minimum value and/or quality.

4. Research Methodology

The present research is of applied-descriptive type with correlative approach which attempts to assess the process documentation effects on promotion of public sector's service quality. Major methods of data collection in this study include library studies and questionnaire distribution to gather secondary and primary data respectively. Library studies were aimed at finding out the dimensions of process documentation, service quality in public sector. These studied were conducted before preparation of questionnaires which were in turn filled by the sample population staff so that their viewpoints could be measured in order to test research assumptions. The distributed questionnaires were intended to measure the performance of process documentation softwares in size as follows:

$$n = \frac{Z_{\frac{\alpha}{2}}^2 \cdot pq}{e^2}$$

In terms of 6 dimensions including applied features, hardware and software, simulation, analysis, integration, and modeling. These questionnaires also aimed at measuring the public sector's service quality according to the framework proposed by Garvin which included the following 8 dimensions: transparency, speed, authenticity, elegance, service providers' behavior, law compliance, simplicity & easiness, and flexibility. Reliability of the questionnaires exceeded 0.7 calculated via Cronbach's Alpha method. Accordingly, the said questionnaires are reliable enough, meaning that answers of the population under study have not been random. On the contrary, they have been derived by impact of the variable tested. The population of this study includes all the executive organizations of private sector in Zahedan district who use process documentation softwares. The samples were selected randomly, and the Cochran formula was used to estimate the sample

For the qualitative variables in the formula of determining the sample size, *p* and *q* are normally 50%, *e* equals

0.05, and Z value is selected from the normal distribution table for the error level of 5%. As a result, the minimum sample size requires was determined as 384 statistical units. Accordingly, to achieve the said number of units, 500 questionnaires were distributed. Eventually, 402 filled-out questionnaires were identified as suitable so that their data could be entered into the analysis software.

With respect to the 8 dimensions of service quality evaluation, the following assumptions can be addressed in order to establish the relationship existing between each of the said dimensions and process documentation in private sector (Figure 2):

Assumption 1) There is a significant relationship between process documentation and transparency (communicating the information) of services provided in the executive organizations.

Assumption 2) There is a significant relationship between process documentation and service delivery speed in executive organizations.

Assumption 3) There is a significant relationship between process documentation and services authenticity in executive organizations.

Assumption 4) There is a significant relationship between process documentation and elegance of services provided by executive organizations.

Assumption 5) There is a significant relationship between process documentation and service providers' appropriate behavior in executive organizations.

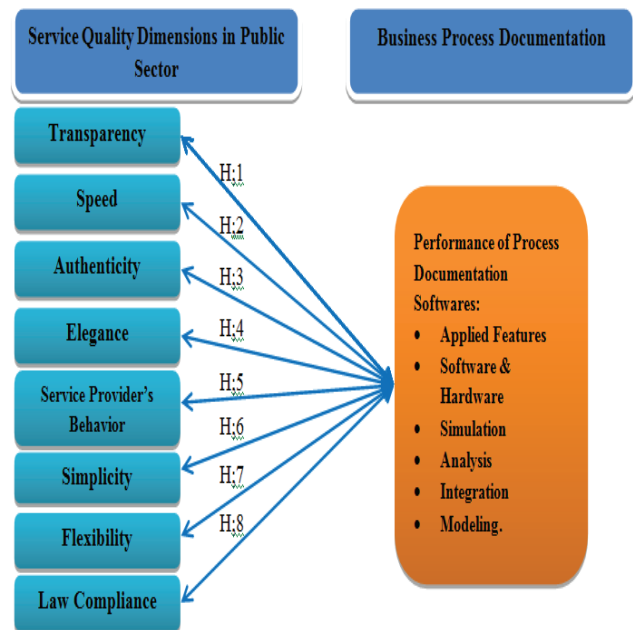


Figure 2. Conceptual Framework of the Research.

Table 2. Results of Research Assumptions Test

Assumptions	Correlation Coefficient	P-Value	Acceptance Criterion	Test Result
Assumption 1) Transparency ↔ Process Documentation	0.600	0.000	$P\text{-Value} \leq 0.05$	Accepted
Assumption 2) Speed ↔ Process Documentation	0.648	0.000	$P\text{-Value} \leq 0.05$	Accepted
Assumption 3) Authenticity ↔ Process Documentation	0.562	0.000	$P\text{-Value} \leq 0.05$	Accepted
Assumption 4) Elegance ↔ Process Documentation	0.507	0.000	$P\text{-Value} \leq 0.05$	Accepted
Assumption 5) Service Provider's Behavior ↔ Process Documentation	0.515	0.000	$P\text{-Value} \leq 0.05$	Accepted
Assumption 6) Simplicity ↔ Process Documentation	0.520	0.000	$P\text{-Value} \leq 0.05$	Accepted
Assumption 7) Flexibility ↔ Process Documentation	0.630	0.000	$P\text{-Value} \leq 0.05$	Accepted
Assumption 8) Law Compliance ↔ Process Documentation	0.541	0.000	$P\text{-Value} \leq 0.05$	Accepted

Assumption 6) There is a significant relationship between process documentation and simplicity of services provided by executive organizations.

Assumption 7) There is a significant relationship between process documentation and flexibility of services provided by executive organizations.

Assumption 8) There is a significant relationship between process documentation and law compliance of services provided by executive organizations.

5. Data Analysis

Due to the Ordinal Scale of measuring the existing variables and unknown distribution type and variance of population, the Spearman's test of correlation coefficient was applied. In case that the measuring scale in the data collected is of the qualitative type, the said coefficient is preferred to Pearson's correlation coefficient. Similar to the other non-parametric tests, the data ranks were used to calculate the ordinal correlation coefficient. The following formula was used to calculate the correlation coefficient and statistic of the study:

$$r_s = 1 - \frac{6 \sum_{i=1}^n d_i^2}{n(n^2 - 1)}$$

In this formula, n represents the number of people involved in the sample collected while d_i is the difference

between i^{th} even ranks. Considering the big size of the sample collected, r_s coefficient has an approximately normal distribution. The standardized Z statistic equals:

$$Z = r_s \sqrt{n-1}$$

Based on the estimated statistic value, P-Value could be calculated. If this value is below 0.05, correlation between the two structures at the 5% error level is significant. Having raised the dimensions for service quality evaluation in public sector, the results of research assumptions test are summarized in Table 2 as follows.

6. Conclusion

According to the fifth principle of comprehensive quality management, permanent improvement of processes and inputs is of priorities to be followed because quality is not a static concept which is realized in a variety of forms as per clients' requirements. Thus, continuous improvement of processes which is of the obvious outcomes achieved through process documentation can theoretically lead to services quality promotion. On the other hand, organizations are obliged to develop internal standards including operator-type control, simultaneous quality control of on-going processes, in case of inaccessibility to or absence of external standards [13]. This highlights and stresses the need for organizational process documentation. In fact, quality of services along with

the consequent customers' satisfaction guarantees the future and success of organization [14]. Having confirmed all the assumptions made, process documentation has a significant relationship with promotion of services quality in terms of simplicity of usage, coordination guarantee, capability of drawing up different operational patterns, providing a structure to link with other tools, capability of working on the network, linking to other softwares and compatibility with most of operating systems, simulation and live monitoring of changes during the process, graphic and simultaneous presentation of changes, multiple execution of a process, guiding how to do analysis, drawing up the results based on the output, improving the processes, doing top-down and inside-out analyses, providing an integration and decision-making viewpoint, capability of substituting different viewpoints, establishing relationship between organization's processes and IT system, using an expert system, and finally modeling parallel operations and interaction between process and strategic levels. The said significant relationship can be due to the following factors: describing the beneficiaries' requirements; creating a permanent and written reference in the organization; determining the evaluation and censorship criteria; knowledge transfer and sharing in the organization; creating tangible culture of the organization; providing sanction in the organization, optimum control of the operations, facilities, and equipments; improving communications and transparency, a criterion to measure and evaluate the performance, obtain an external credit for the organization leading to a promoted reputation of the entity, reducing the mistakes, keeping the processes safe even in case of staff absence.

7. Limitations of the Study

Similar to any research in the field of humanities, this study has been facing its own limitations such as follows:

- The limitation of quantifying the qualitative structures and variables existing in the research
- Potentiality of extending the research results to the other public organizations
- Dispersion of executive organizations in Zahedan district and difficult access to some of them for data collection
- Busy staff of the organizations unwilling to fill out the questionnaires, hence frequent references to the organizations and prolonging the research
- The study's a new topic and lack of a proper understanding in this regard. The subject had to be appropriately

clarified by researcher to the population so that they could fill out the questionnaires with a proper and full understanding of the topic.

8. Suggestions for Further Researches

The following suggestions can be made for potential further researches:

- A research with the same subject can be done in the other provinces in Iran, and the results can be compared with the current research results
- A research with the same subject to be done in a different timeframe, and the results could be compared the present research results
- In another research, the impacts of each independent variable on the dependent variable can be addressed in terms of a cause-and-effect relationship.

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