Chapter 3
Research Methodology

3.1 Introduction
The service industry plays an increasingly important role in the economy of many countries. In today’s global competitive environment delivering quality service is considered as an essential strategy for success and survival. Even the public sector organizations have come under increasing pressure to deliver quality services and improve efficiencies. Customer needs and expectations are changing when it comes to governmental services and their quality requirements. However, service quality practice in public sector organizations is slow and is further exacerbated by difficulties in measuring outcomes, greater scrutiny from the public and press, a lack of freedom to act in an arbitrary fashion and a requirement for decisions to be based in law. Since India has gained independence in 1947, the public sector has undergone a number of transformations. The public sector is under increasing pressure to demonstrate that their services are customer-focused and that continuous performance improvement is being delivered. The purpose of this research is thus to examine the service quality concepts and their application in the public service sector in Maharashtra, India. The study adopts the service quality perceptions approach to examine the customer perceptions of the service and front-line employees’ (FLE) perceptions of customer expectations are matched. As discussed in the previous chapter this approach has been used extensively to assess the quality of private sector services but fewer applications of the approach has been reported in public services.

3.2 Need of the study
With the increasing awareness of the customers about their rights and with the emphasis by all the governments on good governance and citizen centricity the need of a study on the service quality and the role of training in improving service quality is felt very strongly. The Revenue Department is one of the oldest and important departments of the Government. The main functions of the department, especially the Tahsildars, are as follows-

1. Maintain, update the land records of the revenue villages
2. Maintain, in the capacity Taluka/ Tahsil magistrates, law and order situation
3. Issue various certificates like caste, nationality, and solvency
4. Monitor the public distribution system

5. Coordinate and monitor the implementation of various Government schemes

6. Handle, as Quasi-judicial magisterial courts, legal disputes regarding land ownership, encroachment etc.

The Tahsil offices are directly interacting with the citizens and often face the wrath of the public. Public grievance regarding service quality are on a rise and need of quality improvement is strongly felt. With the advent of technology service delivery has become easier but the complexity of the processes has also increased. The attempts of many of the Revenue Collector offices to opt for ISO certifications aim mainly at process improvement but little thought is given for service improvement. There is a need to change the methods of service delivery, improve the service environment and put the customer at the centre. The need of a study on the service quality and means of improvement in the service quality was strongly felt. As discussed in the previous chapter very little research has been done in the field of administrative service quality, especially in India. The research tries to fill the void by studying the service quality aspects of the Tahsil offices as a representative sector of the Revenue Department. The study does not attempt to carry out a detailed training needs analysis (TNA) of the Revenue Department but the results of the study do provide an insight into the training needs of the employees and the non-training support by the Government. The focus of this research is mainly on the study of service quality.

Always, there exists an important question: why should service quality be measured? The SERVQUAL approach is one of the most common methods for measuring service quality. In 1988 Parasuraman, Zeithaml, and Berry developed a generic instrument called SERVQUAL to measure service quality based on input from focus groups. Although SERVQUAL was developed within the marketing sector, it is also used in a variety of organizational settings, including public services (Ramseook-Munhurrun P, 2010). Since 1988 Parasuraman, Zeithaml, and Berry have made numerous changes to SERVQUAL, some in response to problems.

identified by other researchers. For instance, in 1994 they reported on three different SERVQUAL formats; they recommended that researchers use a format that separated customer expectation scores into tolerance zones. However, this procedure gives also rise to two issues: the first is disagreement over what really is being measured in SERVQUAL with expectations and the second is the problematic nature of the resulting difference scores. These two issues are resolved if one follows Cronin and Taylor\textsuperscript{260} (1992), and Teas\textsuperscript{261} (1993), who recommended that expectation ratings be eliminated altogether. In addition, Liljander\textsuperscript{262} (1994) states that there is more support for performance only models than for the disconfirmation model of service quality. Bolton and Drew\textsuperscript{263} (1991) stated that assessments of overall service quality are affected only by perceptions of performance levels. They suggested that direct measures of disconfirmation are more important than expectations. Boulding et al.\textsuperscript{264} (1993) also suggested that perceptions alone influence overall service quality. Furthermore, other studies suggested that SERVQUAL has unstable dimensions. For example, Jiang, Klein, and Carr\textsuperscript{265} (2002) used four dimensions in their study, while Landrum and Prybutok\textsuperscript{266} (2004) used five. Nitecki\textsuperscript{267} (1996) proposed a three-dimensional SERVQUAL model, as opposed the five dimensions proposed by Zeithaml, Parasaruman, and Berry\textsuperscript{268} in 1990. As we have noted, these issues are all resolved if customer expectations are eliminated from the model.

\textsuperscript{265} Jiang, Klein, and Carr (2002). Measuring Information System Service Quality: SERVQUAL from the Other Side. MIS Quarterly, 26(2), 145-166
Figure 3.1 Determinants of Perceived Service Quality

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<th>Determinants of Service Quality</th>
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<td>1. Access</td>
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<td>10. Understanding/ Knowing the customer needs</td>
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Service quality is an old concept. It was initiated in the late 1970s, grown in the 1980s, and progressed in the 1990s. However, measuring and managing service quality from the consumer’s point of view is still rather a debatable issue. In the literature, there are a number of key instruments available for measuring service quality. Nevertheless, the SERVQUAL instrument has been the major technique used to measure service quality and has been extensively implemented and valued by academics and practitioners. The determinants of the perceptions of service quality as discussed by Parasuraman et al seem to apply to all the services.

3.3 Significance of the study

The study tries to analyze the various aspects of quality of services provided by the Tahsil offices in the State of Maharashtra with Rajasthan as a point of comparison. The outcomes of the study will provide an insight into the factors contributing to the service quality of Tahsil offices in particular and the Revenue machinery in general. With some additional research the findings may be applicable to other offices within the Revenue Department.
1. The study will provide a new insight into the applicability of the service quality model to the administrative services and define the dimensionality of these services in the light of customer perceptions.

2. The outcome of the study will help in establishing the relationship between –
   a) Employee Satisfaction and Training;
   b) Employee satisfaction and customer satisfaction;
   c) Training and customer satisfaction in Tahsil offices.

3. The outcome of the study will help in framing a training policy for the employees from Tahsil offices of the Revenue department but the same, with some modifications, can be applied to other cadres within the Department.

4. In case of other Departments of the Government, this study can be useful as a base for framing their training policy. The policy will differ according to the training needs and the type of service provided by the department.

3.4 Objectives of the study

The objectives of the study are as follows-

1. To identify the dimensions of quality of services of a Tahsil office.

2. To find out the relationship between training and job satisfaction among the employees of the Tahsil office.

3. To find out the relationship between a well defined training policy and employee satisfaction with training.

4. To compare the training policies of Rajasthan and Maharashtra.

5. To provide guidelines to frame training policy for the employees of Tahsil offices from the State of Maharashtra so as to improve the quality of services provided to the customers.

3.4.1 Objective 1 –

Objective 1- To identify the dimensions of quality of services of a Tahsil office.

The first objective of the study is to identify the dimensions of the service quality of the Administrative services provided by the Tahsil offices and compare them with the five dimensions suggested by the SERVQUAL model namely tangibles, reliability, responsiveness, reliability, assurance and empathy.
3.4.2 Objectives 2 and 3

Objective 2- To find out the relationship between training and job satisfaction among the employees of the Tahsil office.

Objective 3- To find out the relationship between a well defined training policy and employee satisfaction with training.

Training has a direct relationship with the employees’ performance. Basically training is a formal & systematic modification of behavior through learning which occurs as result if education, instruction, development, & planned experience (Michael Armstrong, 2000). Because of the practical implications of training, it is important to have training that is effective. Studies have proven that more costly but effective training can save money that is wasted on cheap but inefficient training (Ginsberg, 1997). Therefore, training has acquired a strategic value for service industries (Partlow, 1996; Tihanyi et al., 2000; Boudreau et al., 2001), since service quality depends on employee customer care effectiveness (Tsaur and Lin, 2004).

Training has been given priority for excellent services delivery. Quality control of services is very difficult. Manufacturing of products can be checked in the production area before any customer is aware of any defect (Juran, 1992). Automation can used to standardize production process to ensure consistence. This is simply less possible with services. Since the customer is involved in the service delivery process, there is no opportunity to check quality of service in advance. Customers are instantly

aware of breakdown in services. Further since humans deliver services to other humans, automation can rarely be used. Therefore staff training in service delivery becomes a high priority for service firms (Kandampully J276, 2001). A large number of researchers have studied the importance of training in service quality in restaurants. (Kandampully277, 2007; Cairncross et al278, 2008; Khanfar279, 2011; Xiao Yang280, 2010; Ul Afaq et al281, 2011;) Staff training is an essential and indispensable part of Human Resource Management, The importance and value of staff training has long been recognized. Consider the popular and often repeated quotation, ‘Give a person a fish and you feed him for a day. Teach a person to fish and you feed him for a lifetime’ (Mcclelland282 2002). This understandable and far-sighted saying was from a famous ancient Chinese thinker and philosopher Confucius. This saying has explained clearly how important it is to train an employee to conquer his/her work than just give him/her a job of income (Yang283, 2010). Acknowledgement of the importance of training is evident in the introduction of the National Training Policy in 1996 (Maxwell et al284, 2001). This objective tries to assess the impact of training on the quality of the services provided by the Tahsil Offices in Maharashtra and Rajasthan;

277 ibid
to find out the relationship between training and quality of services and to find out whether training can improve the quality of services.

### 3.4.3 Objective 4, 5 and 6

Objective 4- To compare the training policies of Rajasthan and Maharashtra.

Objective 5- To provide guidelines to frame training policy for the employees of Tahsil offices from the State of Maharashtra so as to improve the quality of service provided to the customers.

The study aims to find out the relationship between the training and employee satisfaction. Also, the study tries to find out if employee satisfaction leads to a good service delivery thus resulting into customer satisfaction. It is generally believed that satisfied employees deliver better services resulting in customer satisfaction. The study tries to verify the concept.

### 3.5 Research Hypotheses

The study’s four research hypotheses have been framed around the five objectives of the study. The research hypotheses are as follows-

1. **Hypothesis 1** – Customer satisfaction from quality of services provided by the Tahsil office does not depend on the five dimensions of service quality – tangibles, reliability, responsiveness, assurance and empathy.

2. **Hypothesis 2** - Job satisfaction of the employees of the Tahsil office is related to satisfaction with training.

3. **Hypothesis 3** - Customer satisfaction has a positive relation to employee training.

4. **Hypothesis 4** - Existence of a well designed training policy has a positive effect on employee satisfaction with training.

These hypotheses address the applicability of the five dimensionality of the service quality namely tangibles, reliability, responsiveness, empathy and assurance to the services provided by the Tehsil offices as well as explore new or alternative dimensions of service quality specific to the services under study. They also try to analyze the customer’s perception of service quality and the variables related to the
service quality. The hypotheses also explore the role of training in improving the quality of services provided by the Tehsil offices.

3.6 Research Design

The research methodology adopted in this study has been diagrammatically shown in figure 3.2. In this chapter, each of the elements of the study’s research design will be discussed in detail within the following sections- research hypotheses, selection of services, the sample, the instrument, the pilot test, data collection and analysis along with some of the study’s assumptions and limitations.

3.6.1 Type of Research

The research design is planned as exploratory in the first phase of the research and exploratory plus descriptive research in the second phase of data collection.

- **Phase I- Exploratory**

The pilot study was designed and planned as an exploratory research using a set questionnaire for internal and external customers. The study was designed with a purpose of formulation of research questions, development of hypothesis, clarification of concepts and setting for more precise research in phase II. The typical gap analysis model was used in this phase of the study. The study was designed to get familiarized with the use of the survey questionnaires. Pune District was selected as pilot district and the pilot questionnaire was applied to two Talukas within the District. Based on the results of the pilot study the survey questionnaire for the external customers was modified in order to suite it to the administrative services and a new questionnaire was designed for the internal customers. Thus the first phase was designed to acquaint with the characteristics of the research problem and plan the in depth data collection and analysis accordingly.

- **Phase II- Descriptive**

The second phase of the study was a mix of exploratory and descriptive research. A. Questionnaires have been designed to collect data and study

i) The impact of training on the functioning of the Tahsildars.

ii) The feedback of the customers regarding the quality of services provided by the Tahsildars.
B. The research was focused on following aspects-
   a) Feedback of the customers regarding the quality of service of the Tahsildars.
   b) The effect of training on quality of services.
   c) Providing suggestions to improve current training interventions.

This phase involved collection of data from the internal and external customers from select Tahsil offices from Maharashtra as well as Rajasthan and to analyze the data to draw conclusions.

3.7 Survey method

The survey is useful when a researcher wants to collect data on a phenomenon that cannot be directly observed. The population selected was the internal staff of the Tahsil offices and the customers visiting the Tahsil offices at the time of data collection. The method adopted was a cross sectional single point survey method meaning all the internal and external customers present in the particular Tahsil office were administered the questionnaire. Since the population of internal as well as external customers was very large a sample of the population was studied.
Figure 3.2 Research Methodology at a glance

- **Research Design**: Descriptive
  - **Type of Population**
    - Maharashtra: Customers and service providers/employees
    - Rajasthan: Customers and service providers/employees
  - **Sampling Design**: Non-Probability, Convenience
  - **Sample Size**
    - Maharashtra: 126 questionnaires
    - Rajasthan: 126 questionnaires
  - **Other samples**
    - Group Interviews of customers
    - Group interviews of employees
    - Personal interviews of officers and faculty members of training institutes

- **Research Instrument**
  - Questionnaires
  - Personal Interviews

- **Method of Data Collection**
  - Primary: Questionnaires
  - Secondary: Books, Official websites, GRs, Journals, Research Papers, other websites, interaction with faculty members of Training Institutes

- **Tools used for data analysis**
  - Hypothesis Testing: Factor Analysis, One Way ANOVA, t test, Z test for population proportion
3.8 Designing of the Questionnaire

3.8.1 Instrument Design

Phase I-

The research instrument in the form of a questionnaire was used in the first phase of the study. The same instrument was used for both internal and external customers. The questionnaire was the standard SERVQUAL questionnaire with 22 questions. Two more questions were added to the questionnaire by the researcher keeping the original 22 questions intact. The data was analyzed as a difference between the expectations and perceptions of the customers and gap scores were studied.

Phase II-

The researcher, in the first phase of data collection found that there are some clear limitations to the use of the typical SERVQUAL instrument. The double administration of the questionnaire was equally confusing to the external as well as internal customers. The external customers, majority of who were from rural background and less educated found it difficult to understand the difference between expectation and perception. They were reluctant to fill two questionnaires which appeared similar to them. The internal customers were too loaded with work to spare time to fill two questionnaires. It was a common request to get only one questionnaire- the perceptions questionnaire filled by them.

3.8.2 Instrument Development

The original SERVQUAL instrument developed by Parasuraman, Zeithaml and Berry (1988) is designed to find the differences between the expectations and perceptions of the service experience by the customers. The study assumes that Tahsil settings match with any other service industry. The SERVQUAL studies developed by the instrument’s developers confirm that respondents answering yes to the recommendation questions and no to the problem questions would perceive higher service quality than other respondents. The SERVQUAL questionnaire was thus modified accordingly. It is assumed here that the service quality expectations of the customers

customers are always high. The pilot data also supports the assumption. It is also found that customers are unwilling to fill up two similar questionnaires. Considering the rural/semi-urban background of the customers who generally are less literate the questionnaire was restricted only to the perception scores in the main data collection. The main reason behind the decision was that the service under study is one of its kinds and does not have any competitor in the market.

3.8.3 Modifications in the SERVQUAL questionnaire

The original wording in the SERVQUAL instrument was preserved as far as the same questions are repeated in this study. To modify the SERVQUAL instrument to suite the administrative set up some of the questions have been modified. The word company has been replaced by Tahsil office. The word customer is replaced by either citizen or visitor. Some of the questions in the original SERVQUAL instrument have been found less relevant in the context of a Tahsil office which is a typical government organization. The questions based on giving customers individual attention, having operating hours convenient to all the customers, giving personal service to customers give an altogether different connotation to the services. It is an ‘equal to all’ rule that underlines the Government service. Hence these questions are taken by the customers as questions leading to an underlying favoritism or against the system. Also, the service hours are much flexible in the Government setup and do not strictly follow the 10am to 5pm time. Extended working hours are a routine. Hence these questions are replaced by more realistic questions like availability of employees in office hours. The questions are supported with additional questions to make the point clear.

It was also observed in the pilot study that the usual Likert scale of 1= Strongly Disagree to 7= Strongly Agree adopted by the SERVQUAL instrument (Parasuraman et al. 1988) was a bit confusing to the customers, majority of whom were from rural background with no previous exposure to this kind of study. To reduce the confusion the scale has been reduced to a 1 to 5 range with 1= Fully Agree and 5= Fully Disagree. The psychological association of 1 with something good,

agreeable and acceptable in the mind of common people cannot be ruled out. Hence the scale is reversed for convenience. The reversal has no effect on the data analysis. The only thing to be kept in mind during final data analysis was that as the scale was reversed the corresponding positive and negative values too will reverse. The data has to be analyzed and interpreted accordingly. The use of the "don't know or neutral" category was incorporated to minimize bias (Smith, 1995), and to prevent ethical concerns that respondents were being "forced" into making choices that they felt uncomfortable about for whatever reason.

The dimension of training, its relevance, importance expectations and satisfaction regarding current system were added to the questionnaire for employees or internal customers. Also, a question about the overall satisfaction of the employees with their services/job was added to the original questionnaire. Hence the final questionnaire contained 25 questions for the external customers or citizens and 30 questions for the internal customers or employees.

3.8.4 Design of the Questionnaire

3.8.4.1 Questionnaire for internal customers

There are 30 statements incorporated in the questionnaire designed for the internal customers. The statements corresponding to each service quality dimension are listed below-

- **Tangibles**: Statements 1 to 8
- **Reliability**: Statements 9 and 11
- **Responsiveness and Assurance**: Statements 12 to 15, 17 and 22
- **Empathy**: 10, 16, 23
- **Training**: 18, 19, 20, 24, 26, 27, 29
- **Overall satisfaction with job and training**: 25, 28, 30

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3.8.4.2 Questionnaire for external customers

In all 24 statements are corresponding to the five service quality dimensions while one question each pertains to training and overall satisfaction level. The statement number corresponds with the perception statement of the external customers.

- Tangibles- Statements 1 to 7
- Reliability- Statements 8 to 11
- Responsiveness- Statements 9, 10, 13
- Assurance- 14, 15, 16, 18, 19, 20, 23
- Empathy- 12, 17, 21, 22
- Training- - 24
- Overall satisfaction with the service- 25

The relationship of the items in the questionnaires with their respective service quality dimensions shall be verified by using factor analysis of the perception scores of each item (Parasuraman et al\textsuperscript{288}, 1991). The results of factor analysis segregate the elements which have the strongest relationship with the service quality dimensions.

3.9 Interviews

The study of the Tahsil offices revealed that the external customers are not very comfortable with the written questionnaires. They expressed more freely in open interactions. Hence the structured questionnaires were supported by semi-structured group interviews. In case of internal customers semi-structured interviews were conducted in order to go deeper into the issues regarding service quality and satisfaction with job and training. The use of interviews as a method of data collection has been discussed in detail in the following paragraphs.

3.9.1 Use of semi-structured group interviews

The researcher or the interviewer often uses open questions for interviewing. Data is collected from the interviewee through one to one interactions. The interviewee or respondent is the source of primary data for the study. Interviewing is a way to collect data as well as to gain knowledge from individuals. Kvale\textsuperscript{289} (1996, p. 14) regarded interviews as “... an interchange of views between two or more people on a topic of


mutual interest, sees the centrality of human interaction for knowledge production, and emphasizes the social situatedness of research data.”

Interviews are ways for participants to get involved and talk about their views. In addition, the interviewees are able to discuss their perception and interpretation in regards to a given situation. It is their expression from their point of view. Cohen, Manion and Morrison\(^{290}\) (2000, p. 267) explain “… the interview is not simply concerned with collecting data about life: it is part of life itself, its human embedded-ness is inescapable.”

There are many reasons to use interviews for collecting data and using it as a research instrument. Gray\(^{291}\) (2004, pp. 214) has given the following reasons:

- There is a need to attain highly personalized data.
- There are opportunities required for probing.
- A good return rate is important.
- Respondents are not fluent in the native language of the country, or where they have difficulties with written language.

An important reason this researcher has come across is that the interviewees are not comfortable with written questionnaires and/or giving their responses in writing but feel more comfortable and secure in an open interview. The reasons behind this kind of behavior are discussed in the chapter on analysis and findings.

The aim of the interviews was to collect data about the expectations and perceptions of the internal and external customers about the services provided by the Tahsil offices. The type of interview used was ‘semi-structured group interviews’ in which structured questions were asked using the SERVQUAL questionnaire as reference but additional questions were asked in order to probe into the minds and feelings of the interviewees in order to get a realistic picture of their views and ideas. It was found that people take time to open up and gentle probing helps in retrieving information from their mind. It was also found that individual interviews intimidate people and shuts them off. Group interviews create an atmosphere of camaraderie and security to express oneself. Hence use of semi-structured group interviews was found


to be most suitable method for data collection. The group size was from 5 to 25 depending on the availability of the interviewees. The lists of persons taking part in the interactions have been maintained by the researcher but they have not been included in the thesis or published for the purpose of anonymity and confidentiality of the interviewees.

### 3.9.2 Justification for Use of Group Interviews

Belzile and Öberg\(^292\) (2012) suggested that the integration of participant interaction into the research design can be facilitated by initially asking some basic questions (which are in no way unique to focus-group studies):

- What is the primary research objective?
- What resources (financial and human) are available?
- What theory/theories will be used to design the study, and to analyze and interpret the data?

The answers to these questions provide a starting point from which to consider how to set the stage and support interaction within the groups, as well as how to deal with interaction in data coding, analysis and reporting.

Vaughn\(^293\) et al (1996) has discussed reasons for using focus group interviews for data collection:
1. Focus group interviews offer variety and versatility to both qualitative and quantitative research methods;
2. Focus group interviews are compatible with the qualitative research paradigm—nature of reality, enquirer and respondent relationship, nature of truth statements;
3. Focus group interviews offer opportunities for direct contact with the subjects;
4. The group format allows individuals to form opinions;
5. Focus group interviews offer utility. Focus groups and interviews are also the best methods to resolve seemingly conflicting information, because the researcher has the direct opportunity to ask about the apparent conflict (Harrell\(^294\), 2009). Semi-structured group interviews are conducted with a fairly open


\(^{294}\) Harrell Margaret C. and Bradley Melissa A.\(^294\) (2009), ‘Data Collection Methods, Semi-Structured Interviews and Focus Groups’, Prepared for the U.S. Government National Defense Research Institute at (RAND), Published by the RAND
framework which allow for focused, conversational, two-way communication. They can be used both to give and receive information. Unlike the questionnaire framework, where detailed questions are formulating ahead of time, semi structured interviewing starts with more general questions or topics. Relevant topics are initially identified and the possible relationship between these topics and the issues such as availability, expense, effectiveness become the basis for more specific questions which do not need to be prepared in advance. Not all questions are designed and phrased ahead of time. The majority of questions are created during the interview, allowing both the interviewer and the person being interviewed the flexibility to probe for details or discuss issues (Case 295, 1990). Semi-structured interviewing is guided only in the sense that some form of interview guide, such as the SERVQUAL questionnaire is prepared beforehand, and provides a framework for the interview.

Being less intrusive to those being interviewed the semi-structured interview encourages two-way communication. Those being interviewed can ask questions of the interviewer. In this way it can also function as an extension tool. When individuals are interviewed they may more easily discuss sensitive issues. Often the information obtained from semi-structured interviews will provide not just answers, but the reasons for the answers. Outsiders may be better at interviewing because they are perceived as more objective. Using both individual and group interviews can optimize the strengths of both (Case 296, 1990). The process of conducting semi-structured interview has been explained in detail in the book ‘Managing WHO Humanitarian Response in the Field’ (2008).

Often when selecting the method for primary data collection, researchers query whether focus groups, interviews, or surveys will be most appropriate to the research effort. There are many factors to consider in this decision. One benefit of conducting interviews or focus groups, especially with large populations, is that

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ibid
individuals in those populations appreciate the opportunity to express their opinions and experiences in person, rather than in a pen-and-paper survey (Harrell297, 2009). In this study it was found that the citizens/external customers were hesitant to give any opinion on paper. However the same external customers spoke their feelings in informal open interviews. This might be because people are afraid of writing against the Government system. The results of the analysis of data on SERVQUAL questionnaire clearly reflected this public mentality. In some of the Tahsil offices the public unrest and dissatisfaction was so strong that the responses to questionnaires were deliberately distorted, either all the options on the 1 to 5 scale were filled by the people or the questionnaires were returned blank. Informal interactions with the people revealed that the Office Head was not available for signing the certificates as it was admissions time or the facilities were extremely poor. Focus groups and interviews are thus the best methods to resolve seemingly conflicting information, because the researcher has the direct opportunity to ask about the apparent conflict (Harrell298, 2009).

3.9.3 Method of Interviewing

Semi-structured group interviews of the visitors in the Tehsil offices who were present at the time of data collection were conducted. These visitors may or may not have filled the questionnaire as it was left to their discretion to fill the questionnaire. In case of external customers the questionnaires were filled/discussed first and then informal interviews were conducted. This made the people aware of the purpose and contents of the questionnaires and helped them to confide in the interviewee. It was also emphasized that their identity shall not be revealed. The internal customers were open, confident and clear about their remarks. This was mainly because they were a part of the system and they sincerely want a change in the system.


298 ibid
3.9.4 Interviews of Internal Customers

The internal customers were interviewed before getting the questionnaire filled by them. This helped in getting clear and unbiased views of the employees. The questionnaires were distributed after the group interviews were over. The responses of the group interviews were recorded at the time of the interviews. The identity of the Tahsil offices and their staff has been maintained confidential on request by the staff. The responses are tabulated in Excel sheets.

The internal customers were first interviewed by this researcher and their views about the services of their office, the customers’ expectations, the extent to which the expectations can be fulfilled, the limitations, the infrastructure and facilities, the knowledge/skills front and training were discussed in detail. Apart from these issues the expectations of the internal staff, their suggestions to improve the service quality, their grievances were also discussed in detail. It was found that the internal customers were more than willing to speak as they expressed that it was very rare and unique that an officer from their own department is discussing their problems and expectations with them. Not even once has this interviewer faced any difficulty in calling the employees for an interaction. It was also found that the employees opened up when the Tahsildar / Office Head was not present at the venue. Care was taken not to let the presence of the Tahsildar/ Office Head put any kind of stress or pressure on the employees during the discussions.

3.9.5 Interviews of external customers

Although the open question produces data that is difficult to organize and code, it allows subjects to respond freely and express shades of opinion rather than forcing them to have pre-coded opinions. This is the reason why open semi-structured group interviews were preferred over structured individual/ personal interviews. It was ensured that the interviewees were happy to talk with the interviewer. No forceful interviewing was done at any time or place. Care was taken not to demand too much of their time. It was also made clear about what will happen with the data collected. It was assured to them that what they tell during the interview will be kept anonymous and confidential. Interviewees were selected at random and no specific selection criteria were imposed except that the person has visited the Tehsil office for his/ her personal work which involved an interaction with the office staff. Responses of the
customers, generally called as visitors (Abhyagat) or citizens (Nagarik), were recorded by the interviewee.

3.9.6 Scheme of recording the responses

Stevens\textsuperscript{299} (1995) and Carey \textsuperscript{300} (1996) suggested that descriptions of interactions should be reported as a means to interpret individual and group findings. Wilkinson\textsuperscript{301} (1998) suggested that detailed data excerpts of group interactions, not individual quotations, should be reported. The responses of the internal customers are recorded along with the solutions suggested by the employees. The responses of the external customers or visitors are recorded and they are compared to the responses of the internal customers. The comparison gives a rough idea about what the two types of customers think. Is the thinking in the same direction or are they thinking differently? There are 48 responses from the internal customers while there are 24 responses from the external customers. It is noteworthy that all the points raised by the external customers are supported by respective points raised by the internal customers except one point that employees should themselves maintain their office clean. The employees have asked for good staff to maintain the office. They have expressed that they are already over-burdened. They can at least maintain their own work place clean. Secondly, the external customers have expressed that the information of various schemes should be publicized so that the beneficiaries can apply to the Tehsil or concerned agency for benefits. The employees are of the opinion that the schemes of various departments should be handled by the parent departments and the publicity may be done on the departmental level as funds are not available under the schemes. It puts limitations on the functioning of the Tehsil office. The already over-burdened staff is reluctant to take keen interest in schematic work. The problem may be solved by providing additional staff and funds under the schemes.


3.9.7 Analysis of the data of group interviews

Review of literature suggests that researchers’ way of conceptualizing what is going on in the focus group plays a big role in determining how (if at all) they will utilize the interaction in their analysis and reporting (Öberg and Belzile 302, 2012). As in any type of qualitative research, the analysis of focus group data is based on the methodological approach chosen by the researcher reflecting the study purpose and specific aims. A critical guideline for any qualitative study is that the method and operational practices should be consistent with the approach chosen based on the study purpose (Wilson & Hutchinson 303, 1996). An ideal method of group interaction data analysis should be congruent with the qualitative approach and provide new levels of insight in the phenomena being researched. For this reason, analyzing the group interaction data separately might be one possible approach. By analyzing group interaction data separately, it is possible to extract group and group interaction data and integrate the results in the emerging theme of helping others. Integration of group interaction data with other types of data is very important however it is achieved (Duggleby 304, 2005). The data of interviews of both internal and external customers in this study was analyzed separately and then integrated into the core quantitative data.

3.10 Sample Design

The sample population will be Tahsildars, Naib Tahsildars and employees of the Tahsil offices as service providers and customers (Khatedars), both male and female. The study of services provided by a single cadre of Tahsildars becomes too restricted and defers from the essence of a service quality study. Hence the service quality of a Tahsil office as a unit is studied. It greatly increased the volume of data analysis but also increased the depth and reliability of the data and results of the analysis of the data. The employees will be from the age group 25 to 56 while customers will be from age group 17 to 65 or even more. The total number of Tahsildars in the State of Maharashtra at the time of this research is 648 and that of Naib Tahsildars is 1845. There are in all 20442 class-III posts filled in the Revenue

304 Duggleby W (2005), ‘What About Focus Group Interaction Data?’, Qualitative Health Research, 2005 15: 832, Sage Publication, Online, DOI: 10.1177/1049732304273916 version http://qhr.sagepub.com/content/15/6/832 Visited on 01/02/2013
department as on 31 December 2012. Most of the staff in the Tahsil office falls in the class-III category. The total number of all the cadres becomes very large and may be considered as infinite. Hence non-probability convenience sampling method was adopted. The sampling method is discussed separately in the chapter.

3.10.1 Sampling technique

Regarding the choice of a sample, a non-probability convenience sampling shall be followed. The customers present in the Tahsil office at the time of survey shall be used for getting the questionnaires filled. The questionnaires for the internal customers shall be filled by the employee and officers available in their office at the time of survey. A non-probability convenience sampling method is also adapted because of the large size of the population under study. It is practically not possible to randomly choose the Tahsil offices from Maharashtra as well as Rajasthan because of the geographically large size of the States. It is also economically not feasible and extremely time consuming to randomly select Tahsil offices and visit them individually. Also the results of the pilot study revealed that the responses of the customers do not vary much with location of the Tahsil office. Hence sampling method has little effect on the results of the data analysis. It was also observed in the pilot data collection that sending the questionnaire to the Tahsildars and getting them filled was not useful as the responses were not genuine and many a times manipulated to create a positive picture. This practice may result in wrong data and a misleading result of the data analysis. Hence the researcher personally visited the Tahsil offices and got the questionnaire under her own supervision with minimal interference from the Tahsildar.

3.10.2 Selection of Tahsil Offices

There are six Revenue Divisions and 35 Districts, 109 sub-divisions of the districts and 357 Talukas/ Tahsils in Maharashtra. Similarly there are 33 districts and 251 Tahsils in Rajasthan.

- Maharashtra State-
  - Area 307690 sq. km.
  - Districts- 35
  - Tahsils - 356

- Rajasthan State-
  - Area- 342239 sq. km.
  - Districts- 33
  - Tahsils - 251
The sampling method used is convenience random sampling method in which Tahsil offices from various Divisions have been selected at random. Due care has been taken to ensure that all the Revenue Divisions are represented in the cumulative data. It is necessary to note here that the number of citizens/visitors available in a Tahsil office at a given time cannot be predicted. Also, out of those present, the number of citizens who respond to the request to fill up the questionnaire is very low and unpredictable. Many a time’s citizens are ready to speak in a group discussion but reluctant to fill up a written questionnaire, even though writing name is not mandatory. This is because of the fear factor. Hence it was not possible to assign a fixed number of responses to each Division of Tehsil in each Division. Tahsils are selected at random from each Division and data is also collected at random keeping in view the total number of responses to be 126 for internal and external customers. Hence though all the Tehsil offices are not covered all the Divisions are covered. Also, care has been taken to cover Tehsil offices from Rural, Semi-urban and urban areas.

3.11 Sample size-

The sample identification is done by convenience random sampling method. The sample size has been calculated by the following method-

The minimum sample size for population proportion with absolute precision has been calculated by the following formula:

\[
 n = \frac{z^2 \cdot \frac{\alpha}{2} \cdot P(1 - P)}{d^2}
\]

Where

\[ z^2 \cdot \frac{\alpha}{2} \] is the z value for two sided hypothesis

P is the assumed population proportion

d is absolute precision

In our case it has been calculated taking \( z^2 \cdot \frac{\alpha}{2} \) as 1.96 (\( \alpha=0.05 \)), \( P = 0.70 \), \( d = 0.08 \). Hence the sample size gets evaluated as follows:

\[
 n = \frac{1.96 \cdot 1.96 \cdot 0.70(1 - 0.70)}{(0.08)^2} = 126.05 \approx 126
\]
The population being very large the sample size for the internal as well as external customers comes out to be almost the same. Hence minimum 126 completely filled questionnaires were collected from internal as well as external customers from both the States.

3.12 Methods of Data Collection

Documentary research using – existing data
  - Official records
  - Organizational records

- Survey research – using questionnaires finalized after a pilot study of a controlled sample
- Interview research – by structured (unstructured if the interviewee wishes so) and elite interviews.

3.12.1 Data Collection Tools

1. Secondary data- available from existing information with the Training Institutes and Governments of Maharashtra and Rajasthan. The policy documents of the States, data regarding training programmes, training designs, job charts etc. shall form the secondary data.

2. Primary data- collected through questionnaires and interviews of employees and the customers. This data is again of two types-
   1. Quantitative data collected through questionnaires.
   2. Qualitative data collected through interviews and the researcher’s own experiences.

3.13 The Pilot Test

A pilot study was undertaken by using the original SERVQUAL instrument as it is. The expectation and perception scores of the service experience were obtained from the internal as well as external customers. The pilot study was undertaken in only a few Tehsil offices within the Pune District. Based on the results of the pilot study changes were made in the SERVQUAL questionnaire. The variable of training was also incorporated in the final questionnaire. The expectation scores were not obtained in the actual data collection as it emerged from the results of the pilot study.
that perception counts more than expectations and customers always expect the best kind of services. The responses from pilot study gave an indication that a few questions were difficult to answer as people’s perception of an administrative service are different as compared to typical services rendered by companies or banks. The questions on ‘feel safe’ and ‘individual attention’ were left in the final study as they showed no relevance to the customers. Government services are strongly considered as safe and impartial services by people. Any typological errors in the pilot questionnaire were rectified before the final survey was carried out.

3.14 Data Collection

Data was collected through self administered questionnaires. The researcher personally visited the Tehsil offices and administered the questionnaires to the external as well as internal customers. The internal as well as external customers were briefed about the purpose of the study and confidentiality of their identity and responses. All the internal customers present in the office on that day were administered the questionnaire and interviewed. Similarly all the external customers present in the office on that day were administered the questionnaire. They were not forced to fill the questionnaire but were requested to voluntarily come forward to fill the questionnaire and take part in the group interview. No questionnaire was mailed to any of the Tehsil offices. This precaution was taken to avoid selective responding and manipulation of the responses. The researcher also personally checked whether all the questions were attempted by the customers. Any question left un-attempted was immediately brought to the notice of the respondent and filled immediately. This reduced the rejection of questionnaires on the ground of incompleteness. All the qualitative data was collected through actual personal one-to-one interviews by the researcher.

3.15 Data Processing

The primary data was created from responses on the returned questionnaire. The analysis was conducted on the data directly entered on the basis of responses to specific questions in the questionnaire. The automated Statistical Package for the Social Sciences (SPSS version 17) was used for all data analysis.

All the questions for the external customers were quantitative on a scale of 1 to 5. Three questions 21, 26 and 27 invited the respondent to give opinion or clarify
their answer in a narrative form. These responses along with the responses and opinions shared in the interviews were transcribed and used by the researcher to define patterns and additional insights.

The initial data was entered in Excel which was then transported into SPSS. All the quantitative questions were posed on a scale of 1 to 5. Frequency tables were generated on the basis of the 1 to 5 scale of responses. Data collected from group interviews was entered in Excel sheets and used for further analysis. The accuracy of data entry was checked by the author as each questionnaire was entered. The entire file was proofed against the original questionnaire by at least four individuals- the data entry operator, the researcher, the statistician/ data analysis expert and the assistant statistician. All the errors in the data were rectified as and when detected.

3.16 Analysis of data and Hypothesis Testing
The data was created from responses on the returned questionnaire. The analysis was conducted on the data directly entered on the basis of responses to specific questions in the questionnaire or from the SERVQUAL scores computed from the data. The automated Statistical Package for the Social Sciences (SPSS version 17) was used for all data analysis

**Basic statistical tools**- Frequency tables and basic Pi charts were used for initial analysis and comparison of the data.

**Associations between variables**- Simple tabulation and cross tabulation of data along with a Chi Square test have been done to find out the association between the variables.

**Construct Reliability**- Cronbach’s Alpha test has been applied to the questionnaire scale to ascertain its internal consistency and reliability. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. A "high" value of alpha is often used (along with substantive arguments and possibly other statistical measures) as evidence that the items measure an underlying (or latent) construct. However, a high alpha does not imply that the measure is uni-dimensional. If, in addition to measuring internal consistency, you wish to provide
evidence that the scale in question is one-dimensional, additional analyses can be performed.

**Dimensionality of the construct**- Exploratory factor analysis is one method of checking dimensionality. Technically speaking, Cronbach's alpha is not a statistical test - it is a coefficient of reliability (or consistency). The Factor Analysis is a test which supports and strengthens the findings of Cronbach’s Alpha test. Factor analysis has been applied to the scale in order to investigate the dimensionality of the scale. Correlation among the variables was studied by correlation analysis. Items within a factor showed high collinearity.

**Interdependence and contributions of variables**- Regression analysis has been applied to the data in order to find out the interrelationships among the variables and how much the independent variables contribute to the dependent variable.

**Population proportions**- Z test for population proportions was applied to the data sets from Maharashtra and Rajasthan in order to compare the responses of the external and internal customers. The SAS (Statistical Analysis Software) was used for the Z test.

**3.16.1 Pilot study**-

**A. Computation of SERVQUAL scores**

The SERVQUAL scores are used to assess the quality of services along the five dimensions in the Gap model. The pilot study was conducted on this basis. The five dimensions were defined by grouping the statements on the instrument. For each respondent, for each statement n,

\[ Q_n = C_n - A_n \]

where Q is the SERVQUAL quality score of the service. C is the perception rating and A is the expectation rating. N is the total number of questions/ statements in the questionnaire. For each question difference between the perception score and expectation score was calculated. The questions grouped under each dimension were clubbed and average scores of each dimension were calculated as the SERVQUAL scores of each dimension. These average scores were compared to find out the importance of each dimension in the mind of the customers. The calculations for data
analysis were done using the Microsoft Excel software. The findings of the pilot study revealed that the SERVQUAL instrument in its original form cannot be used in this study. Relevant modifications were made in the questionnaire in order to adapt it to the administrative services.

B. Pretest of Survey Questionnaire

The modified survey questionnaires for external customers and the freshly constructed questionnaire for internal customers was administered to 25 internal and an equal number of external customers in order to make any changes as per the need. Especially the Marathi and Hindi questionnaires needed to undergo a pretest for checking language and correct meaning of the questions. The final questionnaire was used for data collection on a larger scale.

3.16.2 Final Study

The expectation scores were not collected in the final study with an assumption that the expectations of the customers are very high. Also the lacks of any standard for comparison also lead to the decision to collect only perception scores of the customers. Bolton and Drew\textsuperscript{305} (1991) stated that assessments of overall service quality are affected only by perceptions of performance levels. Boulding and Kalra\textsuperscript{306} (1993) also suggested that perceptions alone influence overall service quality. Hence it was decided not to opt for the expectation scores but directly get the perception scores of the external customers.

As discussed in the paragraph 3.7.1 the customers were reluctant to fill two separate questionnaires. Hence it was decided to collect only the perception scores. Critics claim that customer perceived quality is a performance only construct, meaning that expectations do not play an important role in the formation of customer perceived quality. (Cronin & Taylor\textsuperscript{307} 1992; Teas\textsuperscript{308}, 1994b). The same view was adopted in this study.


As discussed in the previous paragraphs the final study was aimed at finding out the correlation among the various aspects of service quality and the relationship between a) Service quality and training, b) Customer satisfaction and employee training, c) Training and stress, d) Service quality and service satisfaction.

To find out the correlation among the various factors and factor analysis the 1 to 5 scale was converted to a 1 to 3 scale with 1=1, 2=1, 3=3, 4=5 and 5=5. Thus 1 = Fully Agree, 3= Neutral (Don’t Know/ Can’t Say- DK/ CS) and 5= Fully Disagree. Further calculations were made on the basis of either the 1 to 5 scale or the 1 to 3 scale according to the requirement of the test.

3.17 Findings

The results of statistical analysis of the data help either in accepting the null hypothesis or rejecting the null hypothesis. The results of the statistical methods used in this research along with the supportive qualitative data from interviews helped in drawing conclusions regarding the dimensionality of the service quality of the services under study. The results of statistical tests and the interpretation of these results based on set rules and defined values helped in drawing conclusions. The results also helped in making generalizations about the population based on the statistics of the sample. The general trends in the population could be studied by formulating general laws or equations. Comparison between data collected from Maharashtra and Rajasthan helped in finding out the areas of improvement and the areas in which Rajasthan is doing better than Maharashtra or vice-a-versa. The findings of this research have opened many new areas of research, like stress in the government servants.

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3.18 Assumptions and Limitations

The study has some obvious assumptions and limitations which have been listed below-

3.18.1 Assumptions of the study

1. In this study on quality of an administrative service it was assumed that the random selection of the respondents identified a representative sample of the users of the administrative services. It was also assumed that the persons identified as users of these services were genuine users of the services. It was confirmed from the general question about the nature of work they have in the office. It was also assumed that irrespective of the nature of service the customers have similar expectations from the services rendered by employees of Tehsil office. Based on the fact that the original questionnaires was in English and an assumption that the respondents cannot read English the questionnaires were translated into Marathi. It was assumed that the essence and meaning of the original instrument was not lost during translation. It was also assumed that all respondents could understand Marathi and gave truthful answers. Those respondents who could not read or write in Marathi were assisted by reading the questions to them and noting the responses shared by them. A number of assumptions were also made on the internal customers’/employees’ understanding of the service quality. It was assumed that the employees have an understanding of the citizen’s expectations from them. It was also assumed that they realize the importance of quality in services.

2. It was also assumed that quality is a universal construct and it is applicable to administrative services irrespective of the demographic characteristics of the customers. It also assumes that the quality is a global and enduring attitude and the customers can assess the quality of services irrespective of their literacy level as well as rural/urban background. The study does not challenge the components of the theoretical basis of the SERVQUAL instrument. It assumes that customers of a service are appropriate judge of the service quality. The study however critically assesses the applicability of the original SERVQUAL instrument to administrative services.
3. The study is also not designed to evaluate the quality of the services rendered by the Tahsil offices as good or bad. It is basically to study the inter-relationships between the various attributes of service quality. It is expected that the data collected from the respondents and its analysis may be useful to the service managers to improve the quality of service.

4. The study aims at finding out the areas for improvement in the service quality and its relationship between service quality and training. It assumes that training plays an important role in service quality management. (Chatterjee C309, 2003).

5. The external respondents are either illiterate or less literate putting a limitation on their understanding of the questions. This may have some effect on the responses but it is difficult to analyze the extent of this impact. It is thus assumed that the effect is very small and can be neglected.

3.18.2 Limitations of the Study

1. The Revenue Department is the largest department in the state with respect to the number of employees. The structure of the department is hierarchical starting from the Talathi at the village level and clerk at the office level. The various cadres within a District are Talathi, Ministerial Clerk, Circle Officer, Awwal Karkuns/ Senior clerks, Naib Tahsildars, Tahsildars, Deputy Collectors, Additional Collectors and Collectors in the ascending order. Within each cadre there are a number of posts. Each post has a different job profile. Hence it is very difficult to study the whole Department. A sample group of Tahsil offices is therefore selected. This cadre has the maximum exposure to and interaction with the public/ customers. The duties and responsibilities of Deputy Collectors, Additional Collectors and Collectors do not fall within the purview of this study.

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2. Only three states have defined and implemented their State Training Policy on the guidelines of the National Training Policy, 1996. These are Kerala, Nagaland, Karnataka, Haryana and Rajasthan. Maharashtra has very recently devised her training policy in 2011. Though the State of Rajasthan has very recently implemented the State Training Policy in 2008 this state is selected for comparison as it is easy to access and is near to Maharashtra compared to the other States. Both states are comparable in a number of aspects. Also the language for communication with the customers in case of Rajasthan is Hindi which the researcher can speak and understand. The questionnaires have to be prepared in English, Marathi as well as Hindi because most of the customers in a Tahsil Office are illiterate/ less educated or have limited knowledge of English. Translation of the questionnaires into vernacular language may lose the original meaning of the statement, though utmost care has been taken to retain the exact meaning of the statements. Translation of Marathi and Hindi interviews into English may have limitations.

3. As the study includes a comparative study between Rajasthan and Maharashtra, it needs traveling and data collection from the States of Maharashtra and Rajasthan. This may consume time.

4. The method of sending the questionnaires by post or e-mail and getting them filled was not possible in this study. The human interference in manipulation of the responses is high. Hence the researcher had to personally go and collect the data in person. This took lot of time but also increased the genuineness of the responses and authenticity of the data.

5. The respondents are either not educated or less educated. Group interviews of the customers were conducted in order to understand their views. This took extra time. Group interviews are discussed in depth in the following chapter.