

Customer Satisfaction with Global System of Mobile Service Quality

(A Case Study of Nepal Telecom)

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RECOMMENDATION OF THE SUPERVISOR

This is to certify that the thesis entitled "**Customer Satisfaction with Global System of Mobile Service Quality: A Case Study of Nepal Telecom**" submitted by Binod Acharya to the Central Department of Public Administration, Faculty of Management, Tribhuvan University for the Master of Philosophy (M Phil) degree was completed under my supervision and guidance. The thesis is the candidate's original work. I have carefully read this final work and I am fully satisfied with the language and the substance of the thesis.

To the best of my knowledge, the candidate has also fulfilled all the requirements of the M Phil. programme of the Central Department of Public Administration, Faculty of Management, Tribhuvan University. I, therefore, recommend that this thesis be considered for the award of M Phil degree.

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Dedication

*Dedicated to all the customers
seeking quality
telecommunication services in
Nepal.*

Acknowledgement

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Abstract

Service quality and customer satisfaction are very important concepts that an organizations must understand if they are to grow business and revenues as well to remain competitive in the business environment. It is very important for companies to know how to measure these constructs from the customers' perspective so as to understand their needs and satisfy them. Service quality is considered to be very critical to any modern business because it contributes higher customer satisfaction, profitability, reduced cost, improved customer loyalty and retention.

The main purpose of this study is to assess customer satisfaction and service quality using SERVQUAL model with GSM Service of Nepal Telecom and its working environment. Other purposes include how customers perceive service quality; identify service quality dimensions that contribute to higher satisfaction, factors affecting customer satisfaction and measures to be taken to improve the level of customer satisfaction and GSM service quality of Nepal Telecom in the competitive industrial environment. A questionnaire was designed and distributed to respondents using a convenience as well as purposive sampling technique to GSM service customers of Nepal Telecom available in the different places of Kathmandu valley. The analysis done resulted that, the overall service quality perceived by customers was weak. Low level of perception regarding service quality means customers' expectations exceeded perceptions. Among six major determining factors of GSM service quality for customer satisfaction as customer care service, service promotion information, network coverage, signal strength, tariff and availability of recharge cards or means of payment, the analysis of the respondents' opinion revealed that Nepal Telecom's performance was very weak in customer care and service promotion information followed by tariff, network coverage and network strength. As far as theory is concerned findings reveals that all the five dimensions and 22 items of SERVQUAL model resulted with negative gap scores in measuring service quality of GSM service quality. This study contributes to the already existing studies examining service quality in telecommunication companies using SERVQUAL model. It also provides empirical results that guide Nepal Telecom and other telecom companies on the corrective measures to enhance service quality and customer satisfaction as well as significant growth in business and revenues.

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List of Abbreviations

1G	:	First Generation
2G	:	Second Generation
3G	:	Third Generation
3GPP	:	3rd Generation Partnership Project
4G	:	Fourth Generation
ACSI	:	American Customer Satisfaction Index
ADSL	:	Asymmetric Digital Subscriber Line
AM	:	Amplitude Modulation
CB	:	Citizen's Band
CDMA	:	Code Division Multiple Access
CRBT	:	Caller Ring Back Tone
D.O.T	:	Department of Telecommunications
EDG	:	Enhance Data Rates for GSM Evolution
ETSI	:	European Telecommunications Standards Institute
EVDO	:	Evolution Data Optimized
FTTH	:	Fiber To The Home
GPRS	:	General Packet Radio Service
GSM	:	Global System of Mobile
HF	:	High Frequency
ICT	:	Information and Communication Technology
IN	:	Intelligence Network
IP	:	Internet Protocol
ISO	:	International Standards Organization
IT	:	Information Technology
IVR	:	Interactive Voice Response
JICA	:	Japan International Cooperation Agency
KTM	:	Kathmandu
LTE	:	Long Term Evolution
MCC	:	Master Control Circuit

MIS	:	Management Information System
NGN	:	New Generation Network
NT	:	Nepal Telecom
NTC	:	Nepal Telecommunication Company Limited
PCL	:	Proficiency Certificate Level
PCL	:	PSTN Credit Limit
PE	:	Public Enterprise
PHD	:	Doctor of Philosophy
PSTN	:	Public Switched Telephone Network
PUK	:	PIN Unblocking Key
SDH	:	Synchronous Digital Hierarchy
SERVQUAL	:	Service Quality
SIP	:	Session Initiation Protocol
SLC	:	School Leaving Certificate
SMS	:	Short Message Service
SPC	:	Stored Program Control
STD	:	Subscriber Trunk Dialing
UMTS	:	Universal Mobile Telecommunications System
USA	:	United States of America
UTL	:	United Telecom Limited
VMS	:	Virtual Memory System
VOIP	:	Voice over Internet Protocol
V-SAT	:	Very Small Aperture Terminal

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Organizations, both private and public, in today's dynamic marketplace are increasingly leaving antiquated marketing philosophies and strategies to the adoption of more customer-driven initiatives that seek to understand, attract, retain and build intimate long term relationship with profitable customers (Kotler, 2006). This paradigm shift has undauntedly led to the growing interest in customer relationship management initiatives that aim at ensuring customer identification and interaction, customization and personalization that unreservedly led to customer satisfaction, retention and profitability, among other things (Thompson, 2004). Organizations are therefore increasingly being more customer-centric and are much interested not just in acquiring new customers, but more importantly, retaining existing customers. This is perhaps because it costs more to attract new customers than to retain existing ones. It is believed that the average business spends six times more to attract new customers than to retain old customers. Again it is more profitable retaining an old customer who is more likely to repurchase or reuse a company's products or services and recommend them to others. Customer retention is, therefore, basically a product of customer loyalty and value which in turn is a function of the level of customer satisfaction or dissatisfaction, (Reichheld,1996).

Customer satisfaction is central to the customer-centric paradigm shift, and has gained much attention from scholars and practitioners as it has become one of the cardinal means for achieving quality improvement programmes, and one of the crucial foci of strategic marketing management in business organizations that have long term perspective for growth. This is because of the intriguing findings, that satisfied customers are more likely to remain loyal and committed to an organization which eventually leads to profits as opined by the popular service – profit – chain proponents (Heskett et al.,1997). In this regard, it is a fact that a very satisfied customer is nearly six times more likely to be loyal and to

repurchase and recommend a product than a customer who is just satisfied. It is again believed that satisfied customers tell five other people about their good treatment and that five percent increase in loyalty can increase profits by 25% to 85%. Conversely, the average customer with a problem eventually tells 8 to 10 other people (Limayem M.,2007).

Customer satisfaction has been a subject of great interest to organizations and researchers alike. The principal objective of organizations is to maximize profits and to minimize costs. Profit maximization can be achieved through increase in sales with lesser costs. One of the factors that can help to increase sales is customer satisfaction, because satisfaction leads to customer loyalty, recommendation and repeat purchase (Wilson et al.,2008).

Customers became very vital in business during the marketing era of the 1950s when companies could produce what they can sell and not just selling what they can produce as it was during the production era. Since the beginning of the consumption era in marketing, the focus on customers has increased more as the consumption era also shifts to post consumption; where organizations are obliged to render more services in addition to what they provide as offers to their customers (David Armano, 2009). What are the qualities of these services provided to customers? Are the customers satisfied with these services? Thus, this research originated from the fact that customers are the key to business. In fact, their satisfaction is the most important tool that helps to increase sales and generate profits in the business environment. Moreover, the importance of customer satisfaction and service quality has been proven relevant to help improve the overall performance of the organizations (Magi & Julander, 1996).

From the view of operations management, it is obvious that customers play important roles in the organizational process (Lee & Ritzman, 2005). Before the placement of strategies and organizational structure, the customers are the first aspect considered by managements. The questions asked in the strategic planning ranges from who will need to consume these offers, where are they and how much can they buy, how to reach the customers and will it yield them maximum satisfaction? After these questions, the organization will then design the product, segment the markets and create awareness. This does not only show the importance of the customers in the business environment but also the importance of customer satisfaction.

Customers are always aiming to get maximum satisfaction from the products or services that they subscribe. Winning in today's marketplace entails the need to build customer relationship and not just building the products; building customer relationship means delivering superior value over competitors to the target customers (Kotler et al.,2002). Whether an organization provides quality services or not will depend on the customer's feedback on the satisfaction they get from consuming the products, since higher levels of quality lead to higher levels of customers satisfaction (Kotler & Keller, 2009).

Most companies are adopting quality management programmes which aim at improving the quality of their products and marketing processes, because it has been proven that quality has a direct impact on product performance, and thus on customer satisfaction (Kotler et al., 2002). The reason for this is to satisfy the customers.

1.1.1 Organization Under Study: Nepal Telecom

Nepal Telecommunication Company Limited(NTC), also known as Nepal Telecom(NT), a government owned telecommunication network operator, was registered on 2060-10-11 under company act 2053 and the notice to this effect was published in the Nepal Gazette dated 26th Chaitra 2060, after dissolving then Nepal Telecommunications Corporation (NTC). However, the Company's name was officially effective from 1st Baisakh 2061(13th April 2004) and is also known to the general public by the name Nepal Telecom as registered trademark.

Nepal Government has started the process of divesting 15% of the shares of Nepal Telecom to the public. Even after divesting, Nepal Government will control 85% share making the Nepal Telecom, a government owned entity, a Public Enterprise (PE).

Nepal Telecom is the leading profit and service making organization in the field of telecommunication and internet service. It has been providing various basic voice services to all ranges of costumers since its establishment. In the past, communication in Nepal was costly and time consuming, but Nepal Telecom has revolutionized the communication sector. Nepal Telecom has always put its endeavor in providing its valued customer a quality service since its inception. To achieve this goal, technologies best meeting the interest of its customers has been selected. Even being a service oriented profit making organization,

Nepal Telecom is becoming more responsible to the customer in terms of quality issues as well as social issues. The nationwide reach of the organization from urban areas to economically non-viable most remote locations has been assisted in the socio economic development of the urban as well as rural areas.

To retain the image and profit, the organization has become highly aware of the customer satisfaction and the quality services. And at the same time the organization is working in dedicated and responsible environment. Nepal Telecom has rapidly grown and it is one of the major tax payer and solver of the development bottleneck in the communication sectors as per Nepal Telecom's annual report 2016, the subscribers were 16.24 million using various voice services like GSM mobile, CDMA mobile, PSTN landlines and 8.07 million of subscribers using internet service like dial up, ADSL, WiMax and mobile data. The growth of the company and emerging threats from new competitors in the industry has created a challenge to understand and access the level of customer satisfaction and the satisfaction level.

Telecommunication is a quick and cheap means of transmitting information. Without telecommunication facilities, neither the government nor the economic activities work effectively. The importance of the telecommunication is not only limited within the country but it also keeps the international link. In developing countries, communication helps to international make people sensitive, active, enthusiastic & skillful. Communication is one of the basic infrastructures for national development.

Nepal Telecom (NT) is the only government owned telecommunication service provider in Nepal. The company was in a monopoly until 2003 when the first private sector operator United Telecom Limited (UTL) started providing basic telephone services. The central office of Nepal Telecom is located at Bhadrakali Plaza, Kathmandu. It has branches, exchanges and other offices in 640 locations within the country.

It is the sole provider of fixed line and leased line services in Nepal. Following the entry of Ncell into Nepal's telecommunications industry in 2005 it is no longer the only provider of GSM mobile service. With more than 4000 employees, it is one of the largest corporations of Nepal. It has total 640 telephone exchanges in various part of the country serving 677078 PSTN lines more than 13.96 million GSM cellular phones and more than 1.6 million CDMA

phone lines according to the MIS report of 2016 published by Nepal Telecommunication Authority. According to recent data there are more than 16.24 million users of Nepal Telecom including all those fixed landline, GSM mobile, CDMA and internet service. The internet subscribers of Nepal Telecom including 3630 dial-up, 180063 ADSL, 16107 WiMax and 7807463 GSM and CDMA data are more than 8 million according to the MIS report of 2016 published by Nepal Telecommunication Authority.

It was known as telecommunication Department at the time of establishment, its name was changed to Telecommunication Development Board in 1969. After the enactment of Communication Corporation Act, 1971, it was formally established as fully state-owned corporation called Nepal Telecommunication Corporation in 1975. On April 14, 2004 Nepal Telecommunication Corporation was transformed to a public limited company. It has been the largest taxpayer in the country with 91.5% of total shares owned by the GoN. Employees, general public and Citizen Investment Fund respectively hold 4.5%, 3.97% and 0.03% of total shares.

Regarding the major services of Nepal Telecom, following eight services are seen the important ones at the present.

1. GSM Mobile Services
2. Basic Telephone Services
3. Rural Telecom Services
4. CDMA Mobile Services
5. Voice, Data and Telegraph Leased Circuit Services
6. E-mail and Internet Services
7. V-SAT Services
8. WiMax Service

And the milestones of Nepal Telecom since its establishment 100 years ago in 1916 AD to 2016 AD found in the official website of Nepal Telecom presents the major services introduced during the period in points. Brief details of different stages of development and launching of new telecom services as per the technology of the respective time are seen in the milestones. It shows that the first telephone line was established in Kathmandu in 1916 AD. Similarly, the other services and milestones to be importantly mentioned here are telegram service in 1950 AD,

distribution of telephone lines to general public in 1955 AD, first automatic exchange in 1965 AD, ISD service in 1987 AD, launching of GSM service in 1999 AD, internet service in 2000 AD, mobile data service in 2007 AD, Wi-Fi Hotspot in 2014 AD and FTTH (fiber to the home) in 2015 AD. The milestone is included in the Annex 1.

1.1.2 GSM Mobile Service

It is popularly known as Global System of Mobile, GSM in short. A cellular network or mobile network is a radio network distributed over land areas called cells, each served by at least one fixed-location transceiver, known as a cell or base station. In a cellular network, each cell uses a different set of frequencies from neighboring cells, to avoid interference and provide guaranteed bandwidth within each cell.

When joined together these cells provide radio coverage over a wide geographic area. This enables a large number of portable transceivers (e.g., mobile phones, pagers, etc.) to communicate with each other and with fixed transceivers and telephones anywhere in the network, via base stations, even if some of the transceivers are moving through more than one cell during transmission.

Cellular networks offer a number of advantages over alternative solutions which are flexible enough to use the features and functions of almost all public and private networks. GSM (Global System for Mobile Communications, originally, is a standard set developed by the European Telecommunications Standards Institute (ETSI) to describe protocols for second generation (2G) digital cellular networks used by mobile phones. It became the de facto global standard for mobile communications with over 80% market share in the world.

The GSM standard was developed as a replacement for first generation (1G) analog cellular networks, and originally described a digital, circuit-switched network optimized for full duplex voice telephony. This was expanded over time to include data communications, first by circuit-switched transport, then packet data transport via GPRS (General Packet Radio Services) and EDGE (Enhanced Data rates for GSM Evolution or EGPRS). Further improvements were made when the 3GPP developed third generation (3G) UMTS standards followed by fourth generation (4G) LTE Advanced standards. "GSM" is a trademark owned by the GSM Association.

1.2 Statement of the Problem

Kotler and Keller (2009) defined satisfaction as a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance in relation to his/her expectations. This definition is supported by many other studies. Nepal Telecom in a competitive environment is facing a strong pressure to maintain the technical and service standards creating a need to understand the level of customer satisfaction.

Statement of the problem describes the content for the study and it also identifies general analysis approach or is the issue that exists in the literature, theory, practice that leads to a need for the study (Creswell, 1994). The understanding of customer needs within current modern competitive telecom industry has become an important factor for the success of service providers. So, companies have moved from product-centric position to customer-centric position. NT is one of the leading government-owned companies functioning in public utility sector. IT provides one of the basic infrastructures for the development of the nation i.e. communication. Without ICT, no industrialization of the economy can be imagined. In this context, NT has a greater role than other public enterprises as all manufacturing, non-manufacturing industries and government dependent enterprises. It has been facing competition for a decade although it enjoyed monopoly over the distribution of services in the past. Being the highest taxpaying government-owned company in the telecommunication sector, its successful operation is very essential to provide timely and effective services to the customers. Services to customers need to match the quality demand and as modern as the time requires. NT being the provider of both voice and data services through PSTN, GSM and CDMA technologies, customer satisfaction based on the service quality makes noticeable impact on the retention and growth of new customers. NT was the only provider of PSTN services until 1999. NT introduced GSM mobile services in 1999 to cope up with changes in technology and meet the need of customers. The introduction of new technologies went extensively with training its workforce throughout the country, modernization of customer service centre and lower tariff rates. These positive steps positioned NT well in the increasing competitive environment in the industry.

Despite several positive initiations taken by the management of NT, the overall performance regarding the increment in revenue creation is a matter of argument. On the continuous process of delivering different services by NT, there are a lot of questions and problems related with

GSM service quality and customer satisfaction. There are discrepancies between perceived performance and expectations from customers' point of view. Dissatisfied customers believe that NT service quality cannot make customers very satisfied due to its quality of services. Improved service quality is the critical factor that will determine the future business. Only the better service quality of NT GSM services as it is the service used by more than 86% of the NT customers. Higher level of customer satisfaction on better perception of service quality of GSM service can help to get better and higher market share as well as revenues. Taking into consideration of service quality parameters of improved GSM service performance, assessment of GSM service quality and customer satisfaction using SERVQUAL model is applied. SERVQUAL model is used to find out the difference between customers' expectations and perceptions in terms of performance of GSM service of Nepal Telecom using different service quality dimensions and items. These dimensions of the model are tangibles, reliability, responsiveness, assurance and empathy. NT will be able to increase market share through high service quality and customer satisfaction in the telecommunication industry by meeting or exceeding expectations of the customers. Therefore, knowing the present level of customer satisfaction with GSM service quality of Nepal Telecom along with the major determinants to be improved for customer anticipated service quality and customer satisfaction on GSM service are issues to be studied.

1.3 Objectives of the Study

Research is essential to assess and improve service delivery and design, because it will provide management with data that they can use in making inferences about the customers (Wilson et al., 2006). The emerging new companies in telecom industries, cutthroat competition, GSM service as a significant portion of teledensity and retaining the balance between image and profit, Nepal Telecom has an urgency to cope with the challenges to understand and access the level of the subscriber satisfaction and satisfaction level.

The main purpose of this study is to examine the relationship between customer satisfaction and service quality in telecom sectors with respect to the service quality dimensions of SERVQUAL model with a case study of Nepal Telecom and its GSM services. The specific objectives are:

- To identify the overall service quality perception by Nepal Telecom's GSM service customers.
- To analyze relationship between service quality dimensions and customer satisfaction with GSM service of Nepal Telecom.
- To identify factors affecting customer satisfaction with GSM service quality in Nepal Telecom.

1.4. Significance of the Study

GSM service is the main and most subscriber holding as well as major revenue generating service provided to customers by Nepal Telecom. GSM mobile service was first launched in 1999. Before 1999, PSTN service had its monopolistic role as it has no alternates. GSM mobile service, especially after easy availability of prepaid service and mobile sets with affordable costs became dominant over PSTN service. At present GSM service is the main and most prioritized service provided by Nepal Telecom. Most of the subscribers subscribe GSM service for both of the voice and data service as cost effective voice and high speed data service are provided in Nepal Telecom's GSM service.

Realizing the above mentioned importance of GSM service of Nepal Telecom, this study is helpful to develop and implement service quality improvement initiatives as well as to find out the weaknesses in quality service delivery for remedial measures. This study particularly makes essential contribution by identifying service quality perception, analyzing dimensions of service quality and finding out measures to be implemented for better level of service quality and customer satisfaction. This study also provides empirical supports for strategy development in creating and delivering customer value, customer satisfaction and loyalty and mutual relationship between customers and achieving growth by Nepal Telecom. Information collected is hoped to be useful for improving marketing activities and quality service provisions. This study is also hoped to be a tool to stimulate further studies on service quality and customer satisfaction relationship.

1.5 Scope of the Study

This study is focused on GSM service of Nepal Telecom. This study covers the service delivery, level of service quality, customer satisfaction and service quality dimensions related to GSM mobile service provided by Nepal Telecom. There are some major reasons to select GSM service of Nepal Telecom for the study. They are:

- Nepal Telecom is the only government owned company in telecom industry with a history of more than a century in Nepal.
- GSM service is the main and covering almost 86 percent of customers in Nepal Telecom.

1.6 Study Questions

This study is directed to extract the information about service quality and customer satisfaction using SERVQUAL model in Nepal Telecom with respect to its GSM service. Therefore, the general research question is:

- How to assess service quality and customer satisfaction with GSM service quality of Nepal Telecom?

Similarly, the specific study questions of this research are:

- What are the expectations and perceptions of customers regarding GSM service of Nepal Telecom?
- How are the service quality dimensions and customer satisfaction on GSM service of Nepal Telecom related?
- What are the factors affecting customer satisfaction with GSM service of Nepal Telecom?

1.7 Limitation of the Study

Since, knowledge exploring in social science is never ending effort, no research in this science could be perfect. As this is a broad study area in nature, all the literature concerning customer satisfaction and service quality could not be assessed because it would have been very voluminous. Thus, hovering in a limited aspect within the literature and relationship between customer satisfaction and service quality dimensions of the SERVQUAL model was the concerned area of study. I have focused on customers because of interest in viewing this issue from the customer perspective and quality services. This study is limited with the service quality of the GSM service of Nepal Telecom as it is best evaluated through satisfaction of customers.

1.8 Structure of the Study

This gives a summary of each chapter of the thesis. This research has been discussed within five different chapters. The first chapter deals with the introductory aspect of the study. It explains the research problems, objectives, significant and limitations of the study along with the background of the study.

The second chapter explains the theoretical and conceptual foundation of the research topic. All the concepts that are important to the study are presented in literature review conceptual definitions and terms related to service quality, customer satisfaction, customer perception and expectation are dealt. Theoretical and empirical analysis along with various studies using SERVQUAL model, research gap and conceptual as well as theoretical framework are discussed.

The third chapter explains the methodology adopted for the study. This deals with the research process, nature and type of data, sampling, data collection and analysis plan.

The fourth chapter deals with the presentation and analysis of the data of the study. It tabulates, describes and analyzes the data and findings. The data collected on respondents' expectations and perceptions of the various items under five different dimensions of SERVQUAL model are presented and analyzed. Gap scores and average gap scores analysis in order to assess the service quality and customer satisfaction is carried out. The final chapter summarizes the study findings that have been outlined to provide answers of research questions. Conclusion that may have importance of implications is provided.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The related literature and models to research problems are reviewed in this chapter. The literature search begins with keywords and search terms (Tranfield D, 2003). For this study customer satisfaction, customer service quality and relationship between service quality and customer satisfaction are the keywords to introduce key concepts. This chapter also focuses on showing research gap, conceptual framework and theoretical framework as well.

2.2 Conceptual Definitions

As this research study is to be focused on assessing customer satisfaction with the service quality of GSM service of Nepal Telecom, all the terms related to service quality and customer satisfaction are defined.

2.2.1 Customer Satisfaction

Customer satisfaction, as a construct, has been fundamental to marketing for over five decades. As early as 1960, Keith (1960) defined marketing as “satisfying the needs and desires of the consumer”. Hunt (1982) reported that by the 1970s, interest in customer satisfaction had increased to such an extent that over 500 studies were published. This trend continued and by 1992, Peterson and Wilson estimated the amount of academic and trade articles on customer satisfaction to be over 15,000.

Several studies have shown that it costs about five times to gain a new customer as it does to keep an existing customer (Naumann, 1995) and this leads into more interest in customer relationships. Thus, several companies are adopting customer satisfaction as their operational goal with a carefully designed framework. Hill and Alexander (2000) wrote in their book that “companies now have big investment in database marketing, relationship management and customer planning to move closer to their customers”. Jones and Sasser (1995) wrote that “achieving customer satisfaction is the main goal for most service firms today”.

Increasing customer satisfaction has been shown to directly affect companies' market share, which leads to improved profits, positive recommendation, lower marketing expenditures (Reichheld, 1996; Heskett et al., 1997), and greatly impact the corporate image and survival (Pizam and Ellis, 1999). Those who buy the goods or services provided by companies are customers. In other words, a customer is a stakeholder of an organization who provides payment in exchange for the offer provided to him by the organization with the aim of fulfilling a need and to maximize satisfaction. Sometimes the term customer and consumer are confusing. A customer can be a consumer, but a consumer may not necessarily be a customer. Another author explained this difference. I.e. a customer is the person who does the buying of the products and the consumer is the person who ultimately consumes the product (Solomon, 2009).

When a consumer/customer is contented with either the product or services it is termed satisfaction. Satisfaction can also be a person's feelings of pleasure or disappointment that results from comparing a product's perceived performance or outcome with their expectations (Kotler & Keller, 2009).

Parker and Mathew (2001) expressed that there are two basic definitional approaches of the concept of customer satisfaction. The first approach defines satisfaction as a process and the second approach defines satisfaction as an outcome of a consumption experience. These two approaches are complementary, as often one depends on the other.

Customer satisfaction as a process is defined as an evaluation between what was received and what was expected (Oliver, 1977, 1981; Olson and Dover, 1979; Tse and Wilton, 1988), emphasizing the perceptual, evaluative and psychological processes that contribute to customer satisfaction (Vavra, 1997).

Parker and Mathews (2001) however noted that the process of satisfaction definitions concentrates on the antecedents to satisfaction rather than satisfaction itself.

Satisfaction as a process is the most widely adopted description of customer satisfaction and a lot of research efforts have been directed at understanding the process approach of satisfaction evaluations (Parker and Mathews, 2001). This approach has its origin in the discrepancy theory (Porter, 1961), which argued that satisfaction is determined by the perception of a difference between some standard and actual performance.

Cardozo (1965); and Howard and Sheth (1969) developed the contrast theory, which showed that consumers would exaggerate any contrasts between expectations and product evaluations.

Olshavsky and Miller (1972); and Olson and Dover (1979) developed the assimilation theory, which means that perceived quality is directly increasing with expectations. Assimilation effects occur when the difference between expectations and quality is too small to be perceived.

Anderson (1973) further developed this theory into assimilation-contrast theory, which means if the discrepancy is too large to be assimilated then the contrast effects occur. The assimilation-contrast effect occurs when the difference between expectations and quality is too large to be perceived and this difference is exaggerated by consumers.

According to Parker and Mathews (2001), the most popular descendant of the discrepancy theories is the expectation disconfirmation theory (Oliver, 1977, 1981), which stated that the result of customers' perceptions of the difference between their perceptions of performance and their expectations of performance. Positive disconfirmation leads to increased satisfaction, with negative disconfirmation having the opposite effect. Yi (1990) expressed that customers buy products or services with pre-purchase expectations about anticipated performance, once the bought product or service has been used, outcomes are compared against expectations. If the outcome matches expectations, the result is confirmation. When there are differences between expectations and outcomes, disconfirmation occurs. Positive disconfirmation occurs when product or service performance exceeds expectations. Therefore, satisfaction is caused by positive disconfirmation or confirmation of customer expectations, and dissatisfaction is the negative disconfirmation of customer expectations (Yi, 1990).

While several studies support the disconfirmation paradigm, others do not. For instance, Churchill and Surprenant (1982) found that neither disconfirmation nor expectations had any effect on customer satisfaction with durable products.

Weiner (1980, and 1985); and Folkes (1984) proposed the attribution theory, which stated that when a customer purchases a product or service, if the consumption is below expectation, the customer is convinced that the supplier causes the dissatisfaction. The complaining customer is focused on restoring justice and the satisfaction outcome is driven by perceived fairness of the outcome of complaining.

Westbrook and Reilly (1983) proposed the value-percept theory, which defines satisfaction as an emotional response caused by a cognitive-evaluative process, which is the comparison of the product or service to one's values rather than an expectation. So, satisfaction is a discrepancy between the observed and the desired.

Fisk and Young (1985); Swan and Oliver (1985) proposed the equity theory, which stated that individuals compare their input and output ratios with those of others and feel equitable treated. Equity judgement is based on two steps; first, the customer compares the outcome to the input and secondly, performs a relative comparison of the outcome to the other party.

Pizam and Ellis (1999) reported that there are two additional distinct theories of customer satisfaction apart from the seven aforementioned ones and these include:

1. Comparison-level
2. Generalized negativity; and

The outcome approach of the customer satisfaction is defined as the end-state satisfaction resulting from the experience of consumption. This post- consumption state can be an outcome that occurs without comparing expectations (Oliver, 1996); or may be a cognitive state of reward, an emotional response that may occur as the result of comparing expected and actual performance or a comparison of rewards and costs to the anticipated consequences (Vavra, 1997).

Furthermore, Parker and Mathews (2001) expressed that attention has been focused on the nature of satisfaction of the outcome approach which include:

1. Emotion - Satisfaction is viewed as the surprise element of product or service purchase and or consumption experiences (Oliver, 1981), or is an effective response to a specific consumption experience (Westbrook and Reilly, 1983). This acknowledges the input of comparative cognitive processes but goes further by stating that these may be just one of the determinants of the affective “state” satisfaction (Park and Mathews, 2001).
2. Fulfillment –The theories of motivation state that people are driven by the desire to satisfy their needs (Maslow, 1943) or by their behaviour aimed at achieving the relevant goals (Vroom, 1964). However, satisfaction can be either way viewed as the end-point in the motivational

process. Thus “consumer satisfaction can be seen as the consumer's fulfillment response” (Rust and Oliver, 1994).

3. State – Oliver (1989) expressed that there are four framework of satisfaction, which relates to reinforcement and arousal. “Satisfaction-as-pleasure” results from positive reinforcement, where the product or service is adding to an aroused resting state and “satisfaction-as-relief” results from negative reinforcement. In relation to arousal, low arousal fulfillment is defined as “satisfaction-as contentment”, a result of the product or service performing adequately in an ongoing passive sense. High arousal satisfaction is defined as “satisfaction as either positive (delight) or negative surprise” which could be a shock (Rust and Oliver, 1994).

The other customer satisfaction definitions include: Satisfaction is the cognitive state of the buyer about the appropriateness or inappropriateness of the reward received in exchange for the service experienced (Howard and Seth, 1969); the evaluation of emotions (Hunt, 1977); the favorability of the individual's subjective evaluation (Westbrook, 1980); a positive outcome from the outlay of scarce resources (Bearden and Teel, 1983); an overall customer attitude towards a service provider (Levesque and McDougall, 1996); is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, included levels of under- or over fulfillment (Oliver, 1997); is an experience-based assessment made by the customer of how far his own expectations about the individual characteristics or the overall functionality of the services obtained from the provider have been fulfilled (Homburg and Bruhn, 1998); the fulfillment of some need, goal or desire (Oliver, 1999); an emotional reaction to the difference between what customers anticipate and what they receive (Zineldin, 2000); is based on a customer's estimated experience of the extent to which a provider's services fulfill his or her expectations (Gerpott et al. 2001).

For this study, customer satisfaction definition used is that of Homburg and Bruhn (1998) which is “an experience-based assessment made by the customer of how far his own expectations about the individual characteristics or the overall functionality of the services obtained from the provider have been fulfilled”.

The relevance of this definition to this study is that it indicates that customers assess the mobile services based on experience of use and the rating is done in accordance with the mobile services

attributes. In this study, customer satisfaction with the GSM mobile services of Nepal Telecom will be evaluated based on customers' experience of network quality and customer care support.

Past research studies suggested that there are four features, which are key drivers of the customer value of cellular services: network quality, price, customer care, and personal benefits (Booz, Allen & Hamilton, 1995, Danaher & Rust, 1996; Bolton, 1998; Gerpott, 1998; Wilfert, 1999).

- The network quality refers to excellent indoor and outdoor coverage, voice clarity, and no connection breakdowns.
- Price refers to what is paid to obtain access to use the network.
- Customer care refers to the quality of the information exchanged between customer and supplier or network provider in response to enquiries and other activities initiated by the network provider, for example presentation of invoices.
- Personal benefits refer to the level of perception of the benefits of mobile communications services by individual customers.

It is apparent from this review that one of the factors customers use to determine satisfaction level is the benefits received from a product or service in comparison with what is spent.

Customer satisfaction is conceptualized as been transaction-specific meaning it is based on the customer's experience on a particular service encounter, (Cronin & Taylor, 1992) and also some think customer satisfaction is cumulative based on the overall evaluation of service experience (Jones & Suh, 2000). These highlight the fact that customer satisfaction is based on experience with service provider and also the outcome of service. Customer satisfaction is considered as an attitude (Yi, 1990). In the case of GSM service of Nepal Telecom, there is some relationship between the customer and the service provider and customer satisfaction will be based on the evaluation of several interactions between both parties.

Therefore we will consider satisfaction as a part of overall customer attitudes towards the service provider that makes up a number of measures (Levesque, 1996). Organizations that consistently satisfy their customers enjoy higher retention levels and greater profitability due to increased customers' loyalty (Wicks & Roethlein, 2009). This is why it is vital to keep customers satisfied

and this can be done in different ways and knowing their expectations and perceptions of services offered by service providers is one of the ways. In this way, service quality could be assessed and thereby evaluating customer satisfaction.

In this study, customers are used to evaluate service quality by considering several important qualities attributes in Nepal Telecom and improvement actions are thought to be taken on the attributes that have a lower satisfaction level. This means customer satisfaction will be considered on specific dimensions of service quality in order to identify the aspects on which customers are satisfied with.

2.2.2 Service Quality

A study carried out by Johns, (1998) points out that a word ‘service’ has many meanings which lead to some confusion in the way the concept is defined in management literature, service could mean an industry, a performance, an output or offering or a process. He further argues that services are mostly described as intangible and their output viewed as an activity rather than a tangible object which is not clear because some service outputs have some substantial tangible components like physical facilities, equipments and personnel. An example of services offered by Nepal Telecom, are voice services and data services which have tangibles such as sales assistances, computers, self-service equipments, brochures. We consider tangible components when assessing activities offered by Nepal Telecom in order to understand better service activities.

Some definitions of quality pointed out by Hardie & Walsh (1994) include;

Quality is product performance which results in customer satisfaction freedom from product deficiencies, which avoids customer dissatisfaction (Juran, 1985)

“Quality is the extent to which the customers or users believe the product or service surpasses their needs and expectations” (Gitlow et al., 1989). “Quality: the totality of features and characteristics of a product that bear on its ability to satisfy stated or implied needs”– International Standards Organization (ISO). “Quality is the total composite product and service characteristics of marketing, engineering, manufacture and maintenance through which the product in use will meet the expectations of the customer” (Feigenbaum, 1986).

Quality has been considered as being an attribute of an entity (as in property and character), a peculiar and essential character of a product or a person (as in nature and capacity), a degree of excellence (as in grade) and as a social status (as in rank and aristocracy) and in order to control and improve its dimensions it must first be defined and measured (Ghylin et al., 2008). The above definitions of quality shed light in understand quality concept and point out that quality has many views.

Service quality is defined as the overall assessment of a service by the customer (Eshghi et al., 2008). Ghylin et al., (2008) points out that, by defining service quality, companies will be able to deliver services with higher quality level presumably resulting in increased customer satisfaction. Understanding service quality must involve acknowledging the characteristics of service which are intangibility, heterogeneity and inseparability, (Parasuraman et al., 1985); (Ladhari, 2008). In that way, service quality would be easily measured. In this study, service quality can be defined as the difference between customer's expectation for service performance prior to the service encounter and their perception of the service received. Customer's expectation serves as a foundation for evaluating service quality because, quality is high when performance exceeds expectation and quality is low when performance does not meet their expectation (Asubonteng et al., (1996). Expectation is viewed in service quality literature as desires or wants of customer i.e., what they feel a service provider should offer rather than would offer (Parasuraman et al.,1988). Perceived service is the outcome of the customer's view of the service dimensions, which are both technical and functional in nature (Gronroos, 1984).

One of the factors that contribute to satisfaction is service quality. Service quality is defined as "the difference between customer expectations and perceptions of service" or "as the customers' satisfaction or dissatisfaction formed by their experience of purchase and use of the service" (Gronroos, 1984 and Parasuraman et al.1988).

In order for a company's offer to reach the customers there is a need for services. These services depend on the type of product and it differs in the various organizations. Service can be defined in many ways depending on which area the term is being used. An author defines service as "any intangible act or performance that one party offers to another that does not result in the ownership of anything" (Kotler & Keller, 2009). In all, service can also be defined as an

intangible offer by one party to another in exchange of money for pleasure. Quality is one of the things that consumers look for in an offer, which service happens to be one (Solomon 2009).

Oliver (1993) reported that service quality is a casual antecedent of customer satisfaction, due to the fact that service quality is viewed at transactional level and satisfaction is viewed to be an attitude. Dabholkar et al. (1996) and Zeithaml et al. (1996) reported that the service quality divisions are related to overall service quality and or customer satisfaction. Fornell et al., (1996) expressed that satisfaction is a consequence of service quality. Hurley and Estelami (1998) argued that there is causal relationship between service quality and satisfaction, and that the perceptions of service quality affect the feelings of satisfaction.

There are various classifications of the components of service quality in marketing science. Gronroos (1984) stated that “in service environments, customer satisfaction will be built on a combination of two kinds of quality aspects; technical and functional ”. Technical quality or quality of the output corresponds to traditional quality of control in manufacturing. It is a matter of properly producing the core benefit of the service. Functional quality or process quality is the way the service is delivered. It is the process in which a customer is a participant and co-producer, and in which the relationship between service provider and customer plays an important role (Wiele et al., 2002).

Technical quality is related to what customer gets (transaction satisfaction); functional quality is related to how the customer gets the result of the interaction (relationship satisfaction).

Lewis (1987) suggested that service quality can be classified as essential and subsidiary. Essential refers to the service offered and subsidiary includes factors such as accessibility, convenience of location, availability, timing and flexibility, as well as interactions with the service provider and other customers.

The classification can also be the core (contractual) of the service, and the relational (customer-employee relationship) of the service. The core or the outcome quality, which refers to what is delivered and the relational or process quality, which refers to how it is delivered are the basic elements for most services. (Grönroos, 1985; McDougall and Levesque, 1992; Parasuraman et al., 1991b; Dabholkar et al., 1996).

McDougall and Levesque (2000) in their direct approach investigation on four service firms (dentist clinic, automobile shop, restaurant, and haircut salon) demonstrated that both core and relational service quality classes have significant impact on customer satisfaction. Heskett et al. (1997) conducted studies on several service firms, such as airline, restaurants, etc and reported that service quality, solely defined as relational quality, has consistent effect on satisfaction and is regarded as key factor in delivering customer satisfaction.

Zeithaml et al. (1990) proposed a comprehensive perception of quality assessment and claimed that they are other factors apart from the dimensions of Parasuraman et al. (1988):

- Access – how easy it is to come into contact with the supplier. This is where position, opening hours, supplier availability, and other technical facilities belong.
- Communication – the ability to communicate in an understandable way that is natural to customer.
- Credibility – referring to being able to trust the supplier
- Courtesy – refers to the supplier's behaviour, e.g. politeness and kindness

Parasuraman et al. (1988), assurance dimension is a combination of the credibility and courtesy dimensions of Zeithaml et al. (1990).

Pizam and Ellis (1999) stated that the gap that may exist between the customers' expected and perceived service quality is a vital determinant of customer satisfaction or dissatisfaction, and not just only a measure of the quality of the service.

Previous studies on mobile telecommunication services, measured services quality by call quality, pricing structure, mobile devices, value-added services, convenience in procedures, and customer support (Kim, 2000; Gerpott et al., 2001; Lee, Lee, & Freick, 2001).

Parasuraman et al. (1988) identified five dimensions of service quality (SERVQUAL) that must be present in any service delivery. SERVQUAL helps to identify clearly the impact of quality dimensions on the development of customer perceptions and the resulting customer satisfaction. SERVQUAL include:

- Reliability - the ability to perform the promised services dependably and accurately.

- Responsiveness - the willingness to help customers and provide prompt service.
- Assurance - the knowledge and courtesy of employees as well as their ability to convey trust and confidence.
- Empathy - the provision of caring, individualized attention to customers, and
- Tangibility - the appearance of physical facilities, equipment, personnel and communication materials.

The model conceptualizes service quality as a gap between customer's expectations (E) and the perception of the service providers' performance (P). According to Parasuraman et al. (1985), “service quality should be measured by subtracting customer's perception scores from customer expectation scores ($Q = P - E$)”. The greater the positive score mark means the greater the positive amount of service quality or the greater the negative score mark, the greater the negative amount of the service quality.

Customers determine satisfaction level of any purchased service by the perceptions of quality received. Therefore, assessment of customer satisfaction in this study from the five different dimensions and twenty items are used to measure service quality of GSM mobile services of Nepal Telecom calculating perception minus expectation (P-E) will be used to assess customer satisfaction through SERVQUAL model.

2.2.3 Management of Complaints

Albrecht and Zemke (1985) found that of the customers who register complaints, between 54% and 70% will do business again with the company if their complaints are resolved. This figure increases to 95% if the customer feels that the complaint was resolved promptly. Customers who have complained to a company and had their complaints satisfactorily resolved tell an average of five people about the good treatment they received. Hart, et al., 1990, reported that when the service provider accepts responsibility and resolves the problem when customers complain, the customer becomes “bonded” to the company.

McNeale (1994) found out that about 5% of the dissatisfied customers actually complain to the appropriate companies but easily tell their friends, colleagues and acquaintances about their experiences. Thus, companies ought to be aware or routinely investigate how well or badly their customers are treated. Ovenden (1995) in his book about studies conducted on several

companies in the UK, such as wholesaler, manufacturers, etc, argued that companies need to be aware how well or badly its customers are treated and that customers rarely complain and when they do, it might be too late to keep such customers.

Levesque and McDougall (1996) in their case study on retail banking found out that if a service problem or customer complaint is ill or not properly handled, it has a substantial impact on the customer's attitude towards the service provider. However, the study did not support the notion that good customer complaint management leads to increased customer satisfaction. They reported that "at best, satisfactory problem recovery leads to the same level of customer satisfaction as if a problem had not occurred".

Nyer (2000) expressed that encouraging customers to complain increased their satisfaction and especially the most dissatisfied customers and stated that "the more a customer complains the greater the increases in satisfaction".

Johnston (2001) reported that complaint management, not only results into increased customer satisfaction, but also leads to operational improvement and improved financial performance.

Other suggested antecedents of customer satisfaction include: disconfirmation paradigm (Yi, 1990, and Szymanski and Henard, 2001); performance (Cadotte, et al., 1988, and Bolton and Drew, 1991); affects (Westbrook and Oliver, 1991 and Mano and Oliver, 1993); and equity (Oliver, 1993 and 1997).

Shrestha and Maharjan (2008) stated that quality of service division system of Nepal Telecom which includes customer care is helpful to improve customer satisfaction and retention.

2.2.4 Assessment of Benefits

Naumann (1995) expressed that the reasons for measuring customer satisfaction may vary among companies, and the success of the measurement depends on if the measurement is incorporated into the firm's corporate culture or not. However, he suggested five reasons for measuring customer satisfaction or five important roles of customer satisfaction measurement:

- To get close to the customer – this will help to understand customers more, their needs, the attributes that are most important, and their effect on the customer's decision making,

the relative importance of the attributes and the performance evaluation of the firm delivery of each attribute. This process helps to provide enabling communication with customers.

- Measure continuous improvement - the important attributes of customers can be incorporated into the internal measurement to evaluate the value-added process in the company. This process involves comparing performance against internal standards (process control and improvement), and comparing performance against external standards (benchmarking).
- To achieve customer-driven improvement – the data collected from customers can be developed into sources of innovations and this can help to achieve customer driven improvement. This requires a comprehensive database and not just records of sales. This process helps to identify opportunities for improvement (quality costing).
- To measure competitive strengths and weaknesses - determine customer perceptions of competitive choices and companies.
- To link customer satisfaction measurement data to internal system

The market share is not a gauge to measure customer satisfaction; rather it represents quantity of customers. Customer satisfaction is a measure of attitudes and perceptions of the quality and performance of a service (Bhote, 1996).

Edvardson and Gustafsson (1999) in their written book about studies conducted on different products and services in Sweden and wrote that customer satisfaction measurement provides significant information for modern management processes and additionally, it provides a warning signal about the future business performance. Oliver (1999) in his article on the link between consumer satisfaction and loyalty with goods and services, expressed that in the last two decades till date, customer satisfaction measurement represents an important source of revenue for market research firms.

Several empirical findings have shown that the application of customer satisfaction measurement often does not accomplish the objectives of the company and the reasons for this shortcoming are;

- Many organizations determine criteria for measurement internally without an accurate understanding of customer priorities (Hill, 1996). This measurement is based on the value defined by organizations and not by the customers, thereby providing wrong information.
- Many companies do not measure customer satisfaction as thorough as manufacture component and those who claim to do so, perform it an inadequate way (Hill and Alexander, 2000).
- Difficulty in translating the customer satisfaction data into action within the organization (Wiele et al., 2002)

Werth (2002) stated that many companies identify the level of customer satisfaction through;

- Number of product or service support problems
- Number of direct complaints by phone, email, etc
- Number of returned products or services and the reason for their return, etc

Fečiková (2004) disagreed with this measurement procedure in that it is a measure of customer dissatisfaction (no satisfaction) and may provide wrong information with no possibility for product or service development and innovation. The criteria for measurement should be customer defined so as to collect, analyze the appropriate data and provide relevant information. Thus, to obtain the right information, efforts should be made to filter out the irrelevant information and concentrate on the valuable dimensions. A convenient tool to achieve this aim is to first conduct a simple pre-study and from this a more effective study can be created. Therefore, for any company to achieve true customer satisfaction, there should be:

- Customer-oriented culture
- Customer-centered company
- Employee empowerment
- Process ownership
- Team building, and
- Partnering with customers and suppliers

He further expressed that the measurement research technique include:

- Survey methodologies
- Focus groups

- Standardized packages
- Various computer softwares

However, these typical measurement techniques have some problems which include;

- Analytical – this involves techniques, formal procedures, systems, etc
- Behavioural – involves the attitudes, beliefs, perceptions, motivation, commitment and resulting behaviour of the people involved in the process.
- Organizational – involves the organizational structure, information flows, management style and corporate culture.

Several empirical studies done on the assessment of customer satisfaction levels include: Gerpott et al. (2001) investigated the customer satisfaction level of 684 residential customers of mobile operators in Germany using the frequency distribution, the results showed that 28% of the respondents were completely satisfied and 6.3% were slightly satisfied or not satisfied. Turel and Serenko, 2006, assessed customer satisfaction level of 210 young adult mobile subscribers in Canada by adapting the American Customer Satisfaction Model, the result obtained was 54.67%. This score was relatively low compared to the 65% obtained by ACSI organization for the USA in 2004.

Fornell (1992) investigated customer satisfaction with 100 corporations in over 30 industries in Sweden and expressed that the benefits of customer satisfaction include the following; highly satisfied customers -

- Stay longer (i.e. prevent customer churn)
- Purchase more as the company introduces new products and upgrades existing products
- Talk favorably about the company and its products or services (helps to improve advertisement)
- Pay less attention to competing brands
- Less sensitive to price
- Offer product or service ideas to the company
- Cost less to serve than new customers because transactions are routine
- Enhances business reputation

These benefits make customer satisfaction and its measurement an important marketing construct, which is especially essential to Nepal Telecom in which the long-term links between operators and customers are of greater importance to business performance.

2.2.5 Demographics and Customer Satisfaction

The social identity theory proposed that attitudes are moderated by demographic, situational, environmental, and psychosocial factors (Haslam et al., 1993; Jackson et al., 1996; Platow et al., 1997). According to the social psychological theories, consumers' evaluations are moderated, or in some cases mediated, by personal feelings of equity in the exchange, disconfirmation between desires and outcomes, individual preferences, social comparisons, and other complex phenomena. These theories strongly suggest that differences in these phenomena among consumers influence their attitudes (Williams et al., 1998).

Several empirical findings that have shown the relationship between demographic variables and satisfaction include:

Bryant et al. (1996) conducted a study on 400 companies using the American Customer Satisfaction Index (ACSI) and demonstrated that there is significant relationship and consistent differences in the levels of satisfaction among demographic groups: Sex – positively related to satisfaction and female customers are more satisfied than the male customers. Female of all ages are more satisfied than the male. Women are more involved with the process of purchase and possibly use the mobile phone more for relational purposes (social network device) while men use it for functional purposes (businesses, sales, etc). Age – positively related to satisfaction but the relationship is not a straight line. Satisfaction increases with age. The major increase in satisfaction is seen within the age 55 and over. Income – the higher the income, the lower the satisfaction level. Location (type of area) – positively related to satisfaction Customers living within metropolitan areas (central city and suburban areas) are less satisfied than those customers in non-metropolitan areas.

Palvia and Palvia (1999) found out that age is a significant determinant of satisfaction with information technology industry. Oyewole (2001) in his research on customer satisfaction with airline services reported also that gender, occupation, education, and marital status have significant influence on customer satisfaction, while age and household income had no

significant influence. Homburg and Giering (2001) conducted a study on German car manufacturers using LISREL notation and demonstrated that it is important to study demographic variables as determinants of customer behaviours. The results of their study showed that gender has significant moderating effect on satisfaction- loyalty relationship. Women are satisfied with sales process while men are satisfied with the impact of the product. Age showed a positive moderating effect and income had moderating influence with high income showing weaker effect and low income, high effect. Jessie and Sheila (2001) in their empirical work on patients' assessment of satisfaction and quality using factor analysis and regression, reported that age, beneficiary group, location, rank, service affiliation, education, marital status, race, gender, health status and number of visits (sociodemographic variables) have minimal influence on satisfaction.

Ahmad and Kamal (2002) conducted a study on a commercial bank using a stepwise regression and demonstrated that there is negative significance between age and satisfaction. When age goes up, satisfaction levels are likely to go down. However, occupation and income levels are positively related to satisfaction. Lightner (2003) in his study on online experience using regression, expressed that age is an important factor in determining satisfaction levels and technology perceptions. VanAmburg (2004) conducted a study on 200 companies using the American Customer Satisfaction Index (ACSI) and demonstrated that age has a significant effect on satisfaction. Younger age groups are less satisfied than older age groups across all products and services industries.

Venn and Fone (2005) conducted a study on patient satisfaction with general practitioner services in Wales using logistic regression and reported that satisfaction varied with age, gender, employment status, and marital status. The results obtained indicated that higher satisfaction is significantly related with increasing age, female gender, unemployed (those at home, disabled and retired), and married patients. However, unemployed - students and those seeking work, reported lower satisfaction.

Turel and Serenko (2006) in their study on customer satisfaction with mobile services in Canada using ACSI, reported that age has a significant influence on customer satisfaction and lower satisfaction level is found among young adults.

From this literature review, it is suggested that customers differ in behaviors and attitudes and one of the factors responsible for this difference is demographics. It is therefore necessary to investigate the impact of demographic factors (age, gender, type of employment and location) on customer satisfaction with GSM mobile service of Nepal Telecom. This investigation is necessary for the first academic study on customers of GSM mobile service of Nepal Telecom and also for demographic factors that are important in the society and greatly affect attitudes, lifestyle, standard of living as well as to investigate the impact of these factors on customer satisfaction with GSM mobile services of Nepal Telecom.

2.3 Theoretical Analysis

Service quality has been defined differently by different people and this study has adopted the definition by Parasuraman et al., (1988), which defines service quality as the discrepancy between a customers' expectation of a service and the customers' perception of the service offering. Measuring service quality has been one of the most recurrent topics in management literature, Parasuraman et al., (1988), Gronroos, (1984), Cronin et al., (1992). This is because of the need to develop valid instruments for the systematic evaluation of service providers' performance from the customer point of view; and the association between perceived service quality and other key organizational outcomes, Cronin et al., (2010), which has led to the development of models for measuring service quality. Gilbert et al., (2004) reviewed the various ways of measuring service quality. They include;

- The expectancy-disconfirmation approach which is associated with the identifying of customer expectation versus what they actually experienced. It focuses on the comparison of the service performance with the customer's expectations. The customer's expectations could be assessed after the service encounter by asking him/her to recall them.
- Performance-only approach merely assesses service quality by merely asking customers about their level of satisfaction with various service features following a service encounter.
- Technical and functional dichotomy approaches identify two service components that lead to customer satisfaction namely, the technical quality of the product which is based

on product characteristics such as durability, security, physical features while functional quality is concerned with the relationships between service provider and customer such as courtesy, speed of delivery, helpfulness.

- Service quality versus service satisfaction approach which mainly focuses on two service components that are interrelated; the transition-specific assessment which evaluates specific features of quality and the overall assessment which evaluates overall quality. This approach links perceived quality at the time of the service encounter or immediately after it and overall satisfaction with the service. Perceived quality is based on attributes of the service over which the company has control and it is a measure of the customer's assessments of the service's value without comparison to customer's expectation.
- Attribute importance approach focuses on the relative weight on the importance the customer places on attributes found to be linked with service satisfaction.
- Parasuraman et al., (1985) developed a conceptual model of service quality where they identified five gaps that could impact the customer's evaluation of service quality in four different industries (retail banking, credit card, securities brokerage and product repair and maintenance). This includes the gaps of;

(a) Gap 1: Customer expectation - management perception gap

Service firms may not always understand what features a service must have in order to meet customer needs and what levels of performance on those features are needed to bring deliver high quality service. This results to affecting the way customers evaluate service quality.

(b) Gap 2: Management perception - service quality specification gap

This gap arises when the company identifies what the customers want but the means to deliver to expectation does not exist. Some factors that affect this gap could be resource constraints, market conditions and management indifference. These could affect service quality perception of the customer.

(c) Gap 3: Service quality specifications – service delivery gap

Companies could have guidelines for performing service well and treating customers correctly but these do not mean high service quality performance is assured. Employees play an important role in assuring good service quality perception and their performance cannot be standardized.

This affects the delivery of service which has an impact on the way customers perceive service quality.

(d) Gap 4: Service delivery – external communications gap

External communications can affect not only customer expectations of service but also customer perceptions of the delivered service. Companies can neglect to inform customers of special efforts to assure quality that are not visible to them and this could influence service quality perceptions by customers.

(e) Gap 5: Expected Service – perceived service gap

From their study, it showed that the key to ensuring good service quality is meeting or exceeding what customers expect from the service and that judgment of high and low service quality depend on how customers perceive the actual performance in the context of what they expected. Parasuraman et al., (1988), later developed the SERVQUAL model which is a multiple item scale developed to assess customer perceptions of service quality in service and retail businesses. The scale decomposes the notion of service quality into five constructs as follows: Tangibles, Reliability, Responsiveness, Assurance and Empathy. It bases on capturing the gap between customers expectations and experience which could be negative or positive with three different cases of the expectation is higher than experience, expectation is less than or equal to experience respectively.

The SERVPERF model developed by Cronin & Taylor, (1992), was derived from the SERVQUAL model by dropping the expectations and measuring service quality perceptions just by evaluating the customer's overall feeling towards the service.

In their study, they identified four important equations:

$$\text{SERVQUAL} = \text{Performance} - \text{Expectations}$$

$$\text{Weighted SERVQUAL} = \text{Importance} \times (\text{Performance} - \text{Expectations}) \quad \text{SERVPERF} = \text{Performance}$$

$$\text{Weighted SERFPERF} = \text{Importance} \times (\text{Performance})$$

Implicitly, the SERVPERF model assesses customers experience based on the same attributes as the SERVQUAL and conforms more closely on the implications of satisfaction and attitude literature (Cronin et al.,1992). Later, Teas, (1993) developed the evaluated performance model

(EP) in order to overcome some of the problems associated with the gap in conceptualization of service quality (Grönroos, 1984; Parasuraman et al., 1985, 1988). This model measures the gap between perceived performance and the ideal amount of a feature not customers expectation. He argues that an examination indicates that the P-E (Perception – Expectation) framework is of questionable validity because of conceptual and definitional problems involving the conceptual definition of expectations, theoretical justification of the expectations component of the P-E framework, and measurement validity of the expectation. He then revised expectation measures specified in the published service quality literature to ideal amounts of the service attributes (Teas, 1993).

Brady & Cronin, (2001), proposed a multidimensional and hierarchical construct, in which service quality is explained by three primary dimensions; interaction quality, physical environment quality and outcome quality. Each of these dimensions consists of three corresponding sub-dimensions. Interaction quality made up of attitude, behavior and expertise; physical environment quality consisting of service conditions, design and social factors while the outcome quality consists of waiting time, tangibles and valence.

According to these authors, hierarchical and multidimensional model improves the understanding of three basic issues about service quality:

- a) What defines service quality perceptions?
- b) How are service quality perceptions formed?
- c) How important is it where the service experience takes place?

And this framework can help managers as they try to improve customers' service experiences (Brady & Cronin, 2001). Saravanan & Rao (2007), outlined six critical factors that customer-perceived service quality is measured from after extensively reviewing literature and they include;

- i. aspects of service delivery (reliability, responsiveness, assurance, empathy)
- ii. Core service (content, features)
- iii. Social responsibility (improving corporate image)
- iv. Systematization of service delivery (processes, procedures, systems and technology)
- v. Tangibles of service (equipments, machinery, signage, employee appearance)

vi. Service marketing

From their study, they found out that these factors lead to improved perceived service quality, customer satisfaction and loyalty from the customer's perspective. According to Brady & Cronin, (2001), based on various studies, service quality is defined by either or all of a customer's perception regarding the following three factors:

- An organization's technical and functional quality.
- The service product, service delivery and service environment; or
- The reliability, responsiveness, empathy, assurances, and tangibles associated with a service experience.

Mittal and Lassar's SERVQUAL-P model reduces the original five dimensions down to four; Reliability, Responsiveness, Personalization and Tangibles. Importantly, SERVQUAL-P includes the Personalization dimension, which refers to the social content of interaction between service employees and their customers (Bougoure & Lee)

2.3.1 The Development of the SERVQUAL Model

Parasuraman et al. (1985) identified 97 attributes which were found to have an impact on service quality. These 97 attributes were the criteria that are important in assessing customer's expectations and perceptions on delivered service" (Kumar et al., 2009). These attributes were categorized into ten dimensions (Parasuraman et al., 1985) and later subjected the proposed 97 item instruments for assessing service quality through two stages in order to purify the instruments and select those with significant influences (Parasuraman et al., 1988).

The first purification stage came up with ten dimensions for assessing service quality which were; tangibles, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding, knowing, customers, and access. They went into the second purification stage and in this stage they concentrated on condensing scale dimensionality and reliability. They further reduced the ten dimensions to five which were;

- i. Tangibility: physical facilities, equipment, and appearance of personnel.
- ii. Reliability: ability to perform the promised service dependably and accurately.
- iii. Responsiveness: willingness to help customers and provide prompt service.

- iv. Assurance: knowledge and courtesy of employees and their ability to inspire trust and confidence.
- v. Empathy: caring individualized attention the firm provides to its customers.

2.3.2 SERVQUAL Functioning

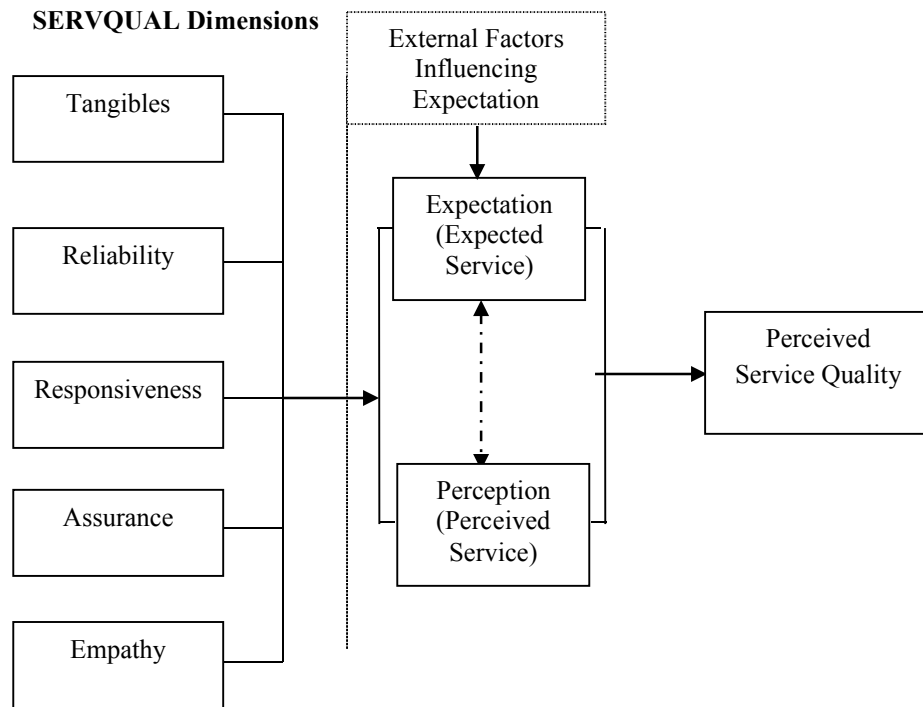


Figure 2.3.2: Measuring Service Quality using SERVQUAL Model

SERVQUAL represents service quality as the discrepancy between a customer's expectations for a service offering and the customer's perceptions of the service received, requiring respondents to answer questions about both their expectations and their perceptions (Parasuraman et al., 1988). The use of perceived as opposed to actual service received makes the SERVQUAL measure an attitude measure that is related to, but not the same as, satisfaction (Parasuraman et al., 1988). The difference between expectations and perceptions is called the gap which is the determinant of customers' perception of service quality as shown on Figure 2.3.2.

2.3.3 Customers' Expectations Compared to Perceptions

Gronroos, (1982); Parasuraman et al., (1985) have proposed that customer's perception of service quality is based on the comparison of their expectations (what they feel service providers should offer) with their perceptions of the performance of the service provider. Parasuraman et al., (1988) point out that expectation is viewed differently in both satisfaction literature and service quality literature. In satisfaction literature, expectations are considered as 'predictions' by customers about what is likely to happen during a particular transaction while in service quality literature, they are viewed as desires or wants of customers, that is, what they feels a service provider 'should' offer rather than 'would' offer.

For this study, expectations define as desires or wants of customers because this allows us to know exactly what service providers show offer and this is based on based past experience and information received (Douglas & Connor, 2003). It is important to understand and measure customer's expectations in order to identify any gaps in delivering services with quality that could ensure satisfaction, Negi, (2009). Perceptions of customers are based solely on what they receive from the service encounter (Douglas & Connor, 2003).

The study is mainly based on this discrepancy of expected service and perceived service from the customer's perspective. This is in order to obtain a better knowledge of how customers perceive GSM service quality of Nepal Telecom. It is not focused on the 1st four gaps because they are mainly focused on the company's perspective even though they have an impact on the way customers perceive GSM service quality of Nepal Telecom and thus help in closing the gap which arises from the difference between customer's expectation and perception of service quality dimensions.

Parasuraman et al., (1985) identified 10 determinants used in evaluating service quality; reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding the customer, and tangibles. Most of these determinants of service quality require the customer to have had some experience in order to evaluate their level of service quality ranging from ideal quality to completely unacceptable quality. They further linked service quality to satisfaction by pointing out that when expected service is greater than perceived service, perceived quality is less than satisfactory quality and will tend towards totally

unacceptable quality; when expected service is equal to perceived service, and perceived quality is satisfactory; when expected service is less than perceived service, perceived quality is more than satisfactory, it will tend towards ideal quality (Parasuraman et al., 1985).

2.3.4 Service Quality and Customer Satisfaction Relationship

According to Sureshchandar et al., (2002,), customer satisfaction should be seen as a multi dimensional construct just as service quality meaning it can occur at multi levels in an organization and that it should be operational zed along the same factors on which service quality is operational zed. Parasuraman et al., (1985) suggested that when perceived service quality is high, then it will lead to increase in customer satisfaction. He supports that fact that service quality leads to customer satisfaction and this is in line with Saravana & Rao, (2007) and Lee et al., (2000) who acknowledge that customer satisfaction is based upon the level of service quality provided by the service provider.

Fen & Lian, (2005) found that both service quality and customer satisfaction have a positive effect on customer's re-patronage intentions showing that both service quality and customer satisfaction have a crucial role to play in the success and survival of any business in the competitive market. This study proved a close link between service quality and customer satisfaction. Su et al., (2002) carried a study to find out the link between service quality and customer satisfaction, from their study, they came up with the conclusion that, there exist a great dependency between both constructs and that an increase in one is likely to lead to an increase in another. Also, they pointed out that service quality is more abstract than customer satisfaction because, customer satisfaction reflects the customer's feelings about many encounters and experiences with service firm while service quality may be affected by perceptions of value or by the experiences of others that may not be good.

2.3.5 Realization of Research Gap

Careful analysis of various research studies conducted so far using the SERVQUAL model, it has been realized that many research works have been carried in different service industries such as education, restaurants, banking, health care, etc, but limited empirical study has been conducted using the SERVQUAL model to assess service quality in telecommunication industry particularly in the developing country of Asia. Therefore, it is considered that telecommunication

as part of the service industry providing both voice and data services. Telecommunication service with system of GSM technology and it's both voice and data service quality based customer satisfaction through SERVEQUAL model is the area of study seen unstudied before.

There were some of research studies which found out the relationship between perceived service quality, customer satisfaction and customer loyalty and it was proven that perceived service quality had a positive relationship with customer satisfaction and this supports the argument of linking service quality and customer satisfaction. They did not use the SERVQUAL model but rather the performance to assess service quality. Therefore using the SERVQUAL model would be a contribution to existing research studies. This is the research gap and in order to fill this gap, it is tried to measure GSM service quality and customer satisfaction using the SERVQUAL model from the customer's perspective in order to know their perceptions in Nepal Telecom.

2.4 Conceptual Framework

Service quality dimension with tangibles reliability, responsiveness, assurance and empathy are used to measure both the expectations and performance of service quality. These two constructs are integrated by SERVQUAL approach. Service expectation and service performance are used to measure the service quality perception. And finally customer satisfaction is measured by calculating the variation of GSM service quality perceptions and expectations. In this study 22 items under five different dimensions of SERVQUAL model are used to measure perceptions and exceptions of GSM service quality of Nepal Telecom.

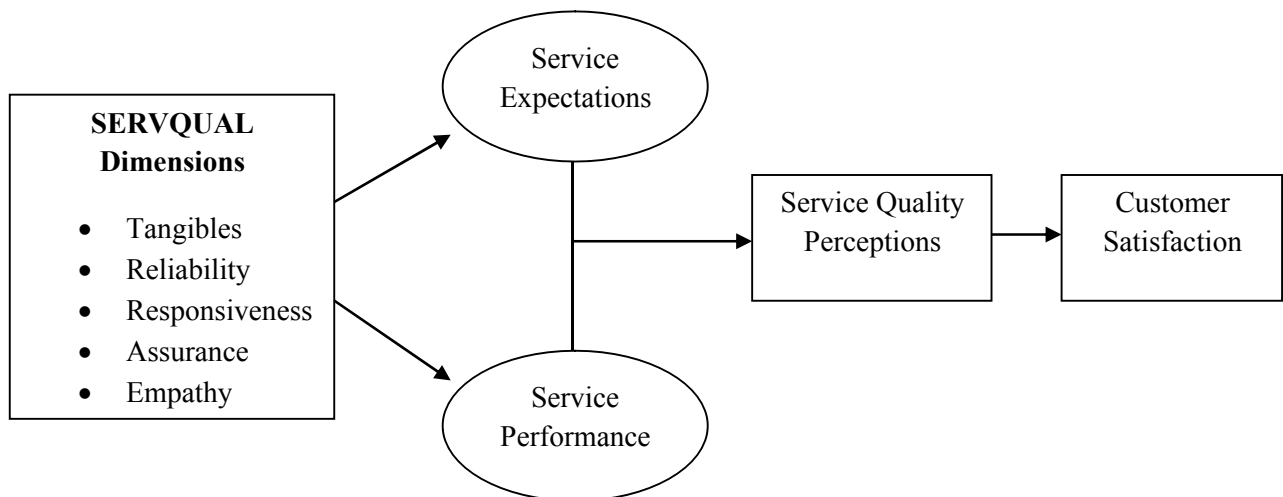


Figure 2.4: Conceptual Framework

As shown in Figure 2.4, the SERVQUAL model is suitable for measuring service quality and customer satisfaction of GSM service in Nepal Telecom. The same dimensions are used to measure both service quality and customer satisfaction because it assumed both are related (Parasuraman et al., 1988) and customer satisfaction is an antecedent of service quality (Negi, 2009). The SERVQUAL approach integrates the two constructs and suggests that perceived service quality is an antecedent to satisfaction (Negi, 2009). Therefore, in this research, the initial 22 items of SERVQUAL model (in the attached appendix) are modified to measure the perceived service quality and customer satisfaction in Nepal Telecom.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research means to search or to find out and examine the answer to questions or solution to the problem. This is the very essence of the process of acquiring new knowledge. Research is original and fundamental contribution to the knowledge on any subject or discipline leading for its advancement. It is voyage towards truth (Tewari, 1997). It is a plan for a study that includes philosophical assumptions, strategies of inquiry, & specifies research methods (Cresswell, 2009). The act of searching into a matter closely and carefully, inquiry directed to the discovery of truth and in particular, the trained scientific investigation of the principles and facts of any subject, based on original and first hand study of authorities or experiment. Sources of knowledge may be styled research and it may be said that without research no authoritative work have been written, no scientific inventions or discoveries made, no theories of any value propounded (Encyclopedia Britannica, 1911). Research methodology is a way to systematically solve the problem. It may be understood as a science of studying how research is done scientifically. Research methods and techniques constitute as a part of the research methodology. The scope of research methodology is wider than that of research methods. Thus, when we talk of research methodology, we not only talk of the research methods but also consider the logic behind the methods we use. In the context of our research study and explain why we are using a particular method or technique and why we are not using others so that research results are capable of being evaluated either by the researcher himself or by others (Cothari, 2004). Similarly, the research methodology is used to develop the scientific knowledge on resource mobilization. Principally, research methodology refers to the theoretical analysis of different methods such as quantitative, qualitative and mixed methods that help to study a particular field of research work. The analysis is done based on the combination of theoretical assumptions through the process of verification, falsification, explanations and interpretation. The process generates the scientific knowledge. It includes series of strategies and techniques of data collection and their interpretation to conduct a scientific inquiry. In this research work, it was explained by developing research design. The research designs are the plans and procedure of data collection and analysis (Creswell, 2009). The plan and procedure consists of the technique of data collection such as questionnaires, interviews,

observations, review of published documents as well as field study notes. On this research, following research methodologies were used for obtaining the stated objectives of the study.

Once a decision has been made to investigate a particular matter there are a number of choices which shape the research design. Three issues in particular need to be considered. They are (i) the research purpose (ii) The research philosophy and (iii) The research method.

The purpose of research can be theoretical or empirical, that is whether it is to create theory or test the theory. Theoretical research constructs new theory by the application of intelligence, logic and experience, to the problem. Empirical research on the other hand uses experimentation and observation to generate evidence by which theory may be developed or verified. However, theory is not developed in a vacuum. So, theorist is using evidence, while all empirical researches should be rooted in theory.

This chapter gives a brief description on how this research has been conducted. This includes research design, research approach, sampling design, variables and measurement procedures, method of data collection and data analysis.

3.2 Research Design

Research design is a matter of determining how to collect the information needed to answer the research questions. This requires consideration of the type and possible sources of the information. It helps to decide the most appropriate strategy and method. Research designs are plans and the procedures for the research that span the decision from broad assumptions to detailed methods of data collection and analysis (Creswell, 2011). Research design is a plan or strategies to use to achieve the expected results. There are different types of research design depending on the nature of a particular study. This includes case study design survey study and experimental design study (Cooper et al, 1998). Case Study Design is used to conduct this research study. Case study is involved when researchers want to gain a rich understanding of the context in the research. This method provides flexibility because it allows the use of different data collection methods such as interviews, questionnaires, observations and documentary review.(Saunders et al.,2009) Also, it is a abroad study of variables and maintains a unitary

nature of the unity of inquiry over a range of variables. It allows the use of triangulation which is important in the process of data validation.

This study is based on descriptive research design as it is necessary to collect data on the issues of service quality, customer satisfaction and service quality determinants of GSM service of Nepal Telecom. In addition to some information found in published documents qualitative data collected directly from service users as respondents in the study. Therefore, the research strategy is seen as a qualitative investigation of smaller number of subscribers out of a large sample.

3.3 Area of Study

Survey of this research study was conducted in Kathmandu Valley because all the required respondents from all over the country are somewhat found there. Performing this study in the Kathmandu Valley made this research study economic from both the money and time point of view.

3.4 Sampling Design

A sample design is a definite plan for obtaining a sample from a given population. It refers to the technique or the procedure the researcher would adopt in selecting items for the sample. Sample design is determined before data are collected. There are many sample designs relatively more precise and easier to apply (Kothari, 2004). Probability or random samplings and non-probability or non-random samplings are procedures of sampling. The probability random sampling is based on the theory of probability. It provides a known non-zero chance of selection for each population element. Similarly, non probability is not based on the theory of probability. This sampling does not provide a chance of selection to each population element (Krishnaswami & Ranganatham, 2012).

A total of 160 copies of the questionnaire were administered to the respondents who are using GSM service of Nepal Telecom. In order to make the administration of the questionnaire less cumbersome, researcher himself directly distributed questionnaire, regular follow up for collection by hand to hand. Out of 160 copies of the questionnaire that were administered, 120

copies were returned and properly completed. Thus, 120 copies were used for the analysis. The response rate achieved was 75 percent.

Non probabilistic sampling was involved in the sampling procedure as this research is case study in design. According to Saunder (2009) non probability sampling (or non-random sampling) provides a range of alternative techniques to select samples based on your subjective judgment to answer research questions and to meet the objectives. Non-probability sampling techniques also provide researcher with the opportunity to select the sample purposively and to reach difficult-to-identify members of the population. The researcher followed appropriate procedure to avoid errors that may occur and cost the whole study.

3.5 Study Approach

The study is focused on the mixed methods of research design used both qualitative and quantitative data. The data are collected form primary as well as secondary sources. To mention more specifically, the qualitative types of data are collected from the primary sources and the quantitative data are obtained from the secondary sources. According to Saunders et al., (2009), there are two main research approaches. They are deduction and induction. With deduction a theory and hypothesis (or hypotheses) are developed and a research strategy is designed to test the hypothesis. With induction, data are collected and a theory is developed as a result of the data analysis. At this study researcher used induction approach because there was no hypothesis testing and data was qualitative in nature.

3.6 Variables

There are two types of variables. They are dependent and independent variables. A dependent variable changes in response to changes in other variables. An independent variable causes changes in a dependent variable (Saunder, 2009). For this study, dependent variable was customer satisfaction where independent variables were service quality dimensions. Any changes to any dimensions of service quality made changes into the satisfaction level of GSM service of Nepal Telecom.

The SERVQUAL model was used to assess customers' expectations and perceptions regarding GSM service quality of Nepal Telecom. Both expectations and perceptions are measured using a 5-point Likert Scale to rate their level of agreement or disagreement ranging from 1- strongly

disagree to 5- strongly agree on which the higher numbers indicate higher level of expectation or perceptions. Perceptions are based on the actual service they receive from GSM service of Nepal Telecom while expectations are based on past experiences and information received about GSM service of Nepal Telecom. Service quality scores are the difference between the perception and expectation scores (P-E) with a possible range of values from (-4) to (+4) which stands for very dissatisfied to very satisfied in range. The quality score measures the service gap or the degree to which expectations exceed perceptions. The more positive the P-E scores, the higher the level of service quality leading to a higher level of customer satisfaction. Satisfaction and service quality are both treated together as functions of a customer's perceptions and expectations. In most cases, when expectation and perception are equal, service quality is satisfactory.

In this study, it has used the disconfirmation paradigm which is based on the discrepancy theories. According to this paradigm, consumer's satisfaction judgments are the result of consumer's perceptions of the difference between their perception of performance and their expectations. Positive disconfirmation leads to increased satisfaction while negative disconfirmation leads to decreased satisfaction. This theory was used while preparing questionnaire.

3.7 Nature and Sources of Data

The search for answer to research questions is called collection of data. Data are facts and other relevant materials, past and present, serving as bases for the study and analysis (Krishnaswami & Rangnatham, 1983). Generally, the data can be collected from the primary and secondary sources. Therefore, for the purpose of getting reliable data and information on this study, primary as well as secondary information are used.

3.7.1 Secondary Sources of Data

Secondary data means data that are already available i.e. it refers to the data which have already been collected and analyzed by someone else. Secondary data may either be published or unpublished data. Usually published data are available in: a) various governmental publications; b) various publications of foreign government or international bodies; c) technical and trade journal; d) books, magazines, and news papers; e) reports and publications of various associations; f) report prepared by research scholars and universities; and g) public records and

statistic, historical documents and other sources published document. The sources of unpublished data are many; they may be found in diaries, letters, unpublished biographies and autobiographies and also may available with scholars and research workers, public, private and other organizations (Kothari, 2004). Therefore, in this study the secondary information has been collected from following methods and sources:

- **Published Documents:** In this study, the published document has been adopted for the secondary information for analysis of getting the prescribed objectives of the study. Similarly it has also been used for making literature review, construct the theoretical framework and the conceptual framework. Different academic writings related to customer satisfaction and service quality have been used.
- **Unpublished document:** Similarly, the document that has not been published anywhere till the time has been used for analyzing the data. Therefore, different unpublished dissertations of different universities related to customer satisfaction have also been used.
- **Internet and Website:** On this study, it is tried to get related information in the internet and related webpage using several key words.

3.7.2 Primary Sources of Data

Primary sources are original sources from which the researcher directly collects data that have not been previously collected. It is first hand information collected through different methods (ibid). Therefore, in this study, the primary information was collected from the following source and method.

Questionnaire

The questionnaire is widely used and useful instrument for collecting survey information, providing structured, open numerical data being able to be administered without the presence of the researcher and often being comparatively straight forward at analyze (Wilson & Mc Clean, 1994 quoted by Panta, 2010). Similarly, a questionnaire consists of a number of questions printed or typed in a definite order on a form or set of forms. The questionnaire is distributed to respondents who are expected to read and understand the questions and write down the reply in the space meant for the purpose in the questionnaire itself (Kothari, 2004).

Five dimensions of the SERVQUAL model namely Tangibles, Reliability, Responsiveness, Assurance, and Empathy were used which are subdivided into 22 statements, which were directed to measuring GSM service quality of Nepal Telecom. As stipulated by the SERVQUAL model, the statements are divided into two parts, the first part seeks to measure the expectations of customers and the second part seeks to measure their perceptions. There was also a part which measures satisfaction level for the purpose of knowing factors that affects satisfaction, the measures to be taken to improve customer satisfaction and the personal details of respondents at the beginning of the questionnaire that provides general demographic information about respondents on age, gender, education, occupation, period of using NT GSM service and average monthly expenditures on mobile service.

This was to enable to get a better understanding of the type of respondents and relate it to how they perceive GSM service quality of Nepal Telecom. The SERVQUAL model was used as the basis for the structured questionnaire because it provides information in research questions in which it is tried to show how customers perceive GSM service quality of Nepal Telecom by assessing the difference between the expectation and perception of services experienced by customers of Nepal Telecom. This enabled to know how perceived service quality by customers and identify which items in the SERVQUAL dimensions customers are satisfied with. Also factors that affect customer satisfaction and the things that should be done to improve the level of customer satisfaction with GSM service of Nepal Telecom.

Administering of Questionnaires

As mentioned earlier in this study, a convenience sampling technique has been used. This study also has used the structured questionnaire for the fulfillment of the research objectives. Similarly, 160 sets of questionnaires were made for respondents for getting information about their expectations, perceptions and opinions regarding the customer satisfaction with GSM service quality of Nepal Telecom. The questionnaires were directly distributed and collected from the respondents.

3.8 Processing and Analysis of Data

Data analysis refers to examining what has been collected in survey or experiment and making deductions and inferences. Furthermore, data analysis is computation of certain measures along

with searching for patterns of relationship that exist among data-groups. On the other hand, data processing consists of a number of closely related operations: editing, classification, coding, and tabulation. Data collected from respondents and documents were processed, edited, classified, provided codes and tabulated. All completed questionnaires were thoroughly checked for completeness, accuracy and uniformity. The raw data obtained from field was prepared for analysis by transforming all of them into codes and entering into spreadsheet packages. The analysis was based on quantitative and some extent of qualitative data and information collected from questionnaires.

3.8.1 Coding and Recoding

The SERVQUAL dimensions and items are main variables used in this study and these items are coded in order to make analysis of collected data easy. To make gap score analysis for customer satisfaction, gaps of the SERVQUAL dimensions and items are also recoded. Demographic information and overall determining factors of customer satisfaction collected from respondents were put as original information in the analysis part.

SERVQUAL Dimensions and Items

Coding:

Tangibles (TAN)

TAN1: Nepal Telecom has up-to-date equipments.

TAN2: Physical facilities are visually appealing.

TAN3: Employees are well dressed and appear neat.

TAN4: Appearance of the physical facilities is consistent with the type of service by Nepal Telecom.

Reliability (REL)

REL1: When they promise to do something by a certain time, they do it.

REL2: When customer has a problem, they show sincere interest in solving the problem.

REL3: Nepal Telecom performs the service right the first time.

REL4: They provide their services at the time they promise to do so.

REL5: Nepal Telecom keeps the records accurately.

Responsiveness (RES)

RES1: Employees make information easily obtainable to customers.

RES2: Employees give prompt services to customers.

RES3: Employees are always willing to help customers.

RES4: Employees are never too busy to respond to customers requests.

Assurance (ASS)

ASS1: The behavior of employees instills confidence in customers.

ASS2: Customers feel safe in their transactions with the employees.

ASS3: Employees are polite to customers.

ASS4: Employees of Nepal Telecom have knowledge to answer customers' questions.

Empathy (EMP)

EMP1: Nepal Telecom gives customers individual attention.

EMP2: Operating hours of Nepal Telecom is convenient to customers.

EMP3: Employees of Nepal Telecom give customers personal service.

EMP4: Nepal Telecom has customers' best interest at heart.

EMP5: Employees of Nepal Telecom understand the specific needs of their customers.

Re-coding

TAN: Average gap score for tangible items = $(TAN1+TAN2+TAN3+TAN4)/4$

REL: Average gap score for reliability items = $(REL1+REL2+REL3+REL4+REL5)/5$

RES: Average gap score for responsiveness items = $(RES1+RES2+RES3+RES4)/4$ ASS:
Average gap score for assurance items = $(ASS1+ASS2+ASS3+ASS4)/4$

EMP: Average gap score for empathy items = $(EMP1+EMP2+EMP3+EMP4+EMP5)/5$

OSQ- Overall service quality = $(TAN+REL+RES+ASS+EMP)/5$

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents the data and results collected from the survey on customer satisfaction with GSM service quality of Nepal Telecom. Using SERVQUAL model and aiming at to determine overall service quality perception of the customers, service quality dimensions for satisfaction, satisfaction hindering factors and to find out things to be done to improve customer satisfaction with GSM Service of Nepal Telecom are presented along with finding discussions. Data presentation of this research study has been done in two steps of analysis. The preliminary analysis includes descriptive statistic and demographic details of the respondents to summarize, and simplify the data for understanding. On the second step of main analysis, the gap score analysis through descriptive data for summarizing means of perceptions and expectations of respondents on GSM service quality of Nepal Telecom. Service quality gaps have been calculated by the perceptions minus expectation scores of each item and dimensions.

4.2 Profile Details of the Respondents

The personal details of the respondents or the demographic profile are to be described here. The total 120 respondents are shown, analyzed and described in terms of their gender, academic qualification, age, occupation and income structure in this section.

4.2.1 Respondents by Gender

Table 4.2.1: Respondents by Gender

Gender	Frequency	Percentage
Male	69	57.5
Female	51	42.5
Total	120	100

Source: Questionnaire Survey, 2016

Out of the total 120 respondents 57.5% were males and 42.5% were females.

4.2.2 Respondents by Education.

Table 4.2.2: Respondents by Education

Education	Frequency	Percentage
Illiterate	4	3.33
Under SLC	17	14.17
SLC	23	19.17
10+2/PCL	26	21.67
Bachelor	30	25.00
Master	16	13.33
M Phil/PHD	4	3.33
Total	120	100

Source: Questionnaire Survey, 2016

Regarding the academic status of the respondents 7 different categories were provided as alternatives in the questionnaire. The highest no of respondents with 25% were bachelor degree holders followed by 21.67% with 10+2 or PCL, 19.17% of SLC, 14.17% of under SLC, 13.33% of Master and 3.33% of M Phil/PHD and illiterate each.

4.2.3. Respondents by Age

Table 4.2.3: Respondents by Age

Age Group	Frequency	Percentage
Below 30	23	19.17
31 to 50	68	56.67
51 to 70	25	20.83
Above 70	4	3.33
Total	120	100

Source: Questionnaire Survey, 2016

Majority of the respondents are of age group of 31 to 50 years of age with 56.67% percent followed by 20.83%, 19.17%, and 3.33% percent of age group 51 to 70, below 30 and above 70 respectively.

4.2.4 Respondents by Occupation

Table 4.2.4: Respondents by Age

Occupation	Frequency	Percentage
Agriculture	3	2.50
Salaried Job	75	62.50
Business	23	19.17
Student	14	11.67
Others	5	4.16
Total	120	100

Source: Questionnaire Survey, 2016

Different occupations of respondents were summarized into 5 categories as agriculture, salaried job, business, student and others. Most of the respondents are job holders with 62.5 percentages. 9.17 percentages of respondents are business persons, 11.67 percentages are student and only 2.50 percentages are in the agricultural activities.

4.2.5 Respondents by Period of Using GSM Service of NT

Table 4.2.5: Respondents by Period of Using GSM Service of NT

Period (In Year)	Frequency	Percentage
More than 15	7	5.38
10-15	29	24.17
5-10	68	56.67
Less than 5	16	13.33
Total	120	100

Source: Questionnaire Survey, 2016

Respondents were asked to mention the period of using GSM service of Nepal Telecom in the questionnaire. Summarizing their response in 4 different categories of period, it is seen that majority of the customers have been using the service for 5-10 years with 56.67 percentage.

Customers using the service for 10-15 years, less than 5 years and more than 15 years are 24.17%, 13.33% and 5.83% respectively.

4.2.6 Respondents by Monthly Expenditure on Mobile Service

Table 4.2.6: Respondents by monthly expenditure on mobile service

Monthly Expenditure on Mobile Service(In Rs)	Frequency	Percentage
Up to 500	47	39.17
501-1000	58	48.33
1001-2000	10	8.33
Above 2000	5	4.17
Total	120	100

Source: Questionnaire Survey, 2016

Monthly average expenditure on mobile service by the respondents was also an issue to be studied on questionnaire. Four different monthly expenditure range group of 501 to 1000, up to 500, 1001 to 2000 and above 2000 are used to show the expenditure pattern which covered 48.33%, 39.17%, 8.33% and 4.17% of respondents respectively.

4.3. Perception of the Overall Quality of GSM Service by Customers of Nepal Telecom

Table 4.3: Summary of Expectations, Perceptions by Customers and Gap Scores

SERVQUAL Dimension	Statement	Expectation Score In Average	Perception Score In Average	Gap Score	Overall Gap Score
Tangibles(TAN)	TAN 1	5	3.18	-1.82	-6.55
	TAN 2	5	3.05	-1.95	
	TAN 3	5	3.13	-1.87	
	TAN 4	5	4.09	-0.91	
Reliability(REL)	REL1	4.72	3.77	-0.95	-4.53
	REL 2	4.63	3.63	-1	
	REL 3	5	4.03	-0.97	
	REL 4	4.26	3.57	-0.69	
	REL 5	5	4.08	-0.92	
Responsiveness(RES)	RES 1	5	3.68	-1.32	-4.54
	RES 2	4.22	3.63	-0.55	
	RES 3	5	3.59	-1.41	
	RES 4	5	3.74	-1.26	
Assurance(ASS)	ASS 1	4.24	3.71	-0.53	-4.63
	ASS 2	5	3.82	-1.18	
	ASS 3	5	3.41	-1.59	
	ASS 4	5	3.67	-1.33	
Empathy(EMP)	EMP 1	5	3.78	-1.22	-7.24
	EMP 2	5	3.48	-1.52	
	EMP 3	5	3.57	-1.43	
	EMP 4	5	3.58	-1.42	
	EMP5	5	3.35	-1.65	

Source: Questionnaire Survey, 2016

Both the expectations and perceptions regarding service quality of Nepal Telecom's GSM service were measured through the 5-point Likert Scale. The scale indicates that the higher numbers for the higher level of expectation or perception. In this study, customers' expectation exceeded the perception level of service. This resulted in negative gap score (Perception-Expectation). It is however common for customers' expectation to exceed the actual service perceived and this signifies that there is always need for improvement according to Parasuraman et al., (1988).

As there are five dimensions and twenty two different items of service quality expectations and perceptions by customers of GSM service of Nepal Telecom using SERVQUAL model, all the items from tangibles and empathy dimensions, three items from responsiveness and assurance dimensions and only two item from reliability dimension were the items with the highest expectation of score 5. They were GSM customer service centers of NTC have up to date equipments, physical facilities of NTC are visually appealing, employees of NTC are well dressed and appear neat and physical environment of Nepal Telecom is clean from tangibles. From empathy dimension, all the items, employees of NTC give individual attention to customers, operating hours of NTC are convenient to the customers, employees of NTC give individual service to customers, Nepal Telecom has their customers' interest at heart and employees of NTC understand customers' specific need were under the highest expectation. Similarly, two items of NTC provides the service at the promised time and Nepal Telecom keeps records accurately from reliability, three items of employees make information obtainable easily to customers, employees are always willing to help customers and employees are never too busy to respond to customer requests from responsiveness dimension, and three items of customers feel safe in their transactions of customer service counters with NT employees, employees of NT are polite and NT employees have the knowledge to answer customers' questions from the assurance dimension were the highest expectation items. However, the other remaining 5 items were also not very different from the highest expectation scores. It can be implied that customers expect very high from Nepal Telecom regarding the quality of GSM service along with its customer service centers.

Regarding the perception of the service quality of Nepal Telecom's GSM service, the items rated highest for actual service perceived were physical environment of Nepal Telecom is clean from

tangibles dimension, Nepal Telecom keeps their records accurately and Nepal Telecom performs the service right the first time from reliability dimension followed by other items as NT employees are always willing to help customers from responsiveness dimension, customers feel safe in their transaction with NT employees in the customer service counters from assurance dimension and employees of NTC understand the customers' specific needs from empathy dimension, employees are never too busy to respond to customers' requests under responsiveness dimension. The lowest level of perception of service quality of Nepal Telecoms GSM service is from the tangibles dimension and the item is physical facilities of Nepal Telecom are visually appealing with average score of 3.05.

Scores among the perception items and between the expectation items scores were not in so big difference. But perceptions were lower than expectations in general. The differences between the perception and expectation scores are the gap scores. Service quality and the customer satisfaction at the ultimate level are measured by gap scores. The lower the difference between perception and expectation scores, the higher the level of perceived service quality and customer satisfaction. The higher the gap scores, the lower the perception of service quality and customer satisfaction. The best perception of service quality for customer satisfaction with GSM service of Nepal Telecom is the behavior of employees of Nepal Telecom instill confidence in customers from assurance dimension followed by responsiveness dimension and the item NT employees give prompt services to customers as the gap scores are -0.53 and -0.55 respectively. The worst level of perception and satisfaction is from the tangible dimension and the item is physical facilities of Nepal Telecom are visually appealing with the gap score (-1.95).

Overall perception level of service quality the customers received was lower than what they expected from GSM service of Nepal Telecom. It indicates there is lower satisfaction level. Parasuraman et al., (1985) suggested that when perceived service quality is high, it will lead to increase in customer satisfaction. He supports the fact that service quality leads to customer satisfaction and this is in line with view of customer satisfaction is based upon the level of service quality provided by the service providers from Saravana and Rao, (2007) and Lee et al., (2000). According to Fen and Lian, (2005), higher perception indicates higher satisfaction because services quality and satisfaction are directly related. Therefore, this is a positive

challenge for improving quality service delivery of GSM service by Nepal Telecom as average perception score is low. This could be possibly because of either the under delivering of quality GSM services by Nepal Telecom or the over promising of Nepal Telecom to customer on their GSM services.

4.4 Service Quality Dimensions and Average Gap Scores

Customer's perception on the service quality of GSM service of Nepal Telecom was found out through the gap score analysis in the above table 4.3. We tried to identify the dimensions of service quality which are reasons for customer satisfaction. And this table 4.4 is also the expansion of table 4.3 to show the average gap scores for each of the service quality dimensions. According to Parashuraman et al., (1985), the higher the perception (P) minus expectation (E) scores, the higher the perceived service quality that leads to a higher level of customer satisfaction. Therefore, the gap scores were calculated on the basis of difference between the customer's perceptions and expectations of GSM service quality of Nepal Telecom.

Table 4.4: Average Gap Scores on Expectation and Perceptions

SERVQUAL Dimension	Statement	Expectation Score In Average	Perception Score In Average	Gap Score	Overall Gap Score	Average Gap Score
Tangibles(TAN)	TAN 1	5	3.18	-1.82	-6.55	-1.64
	TAN 2	5	3.05	-1.95		
	TAN 3	5	3.13	-1.87		
	TAN 4	5	4.09	-0.91		
Reliability(REL)	REL 1	4.72	3.77	-0.95	-4.53	-0.91
	REL 2	4.63	3.63	-1		
	REL 3	5	4.03	-0.97		
	REL 4	4.26	3.57	-0.69		
	REL 5	5	4.08	-0.92		
Responsiveness(RES)	RES 1	5	3.68	-1.32	-4.54	-1.14
	RES 2	4.22	3.63	-0.55		
	RES 3	5	3.59	-1.41		
	RES 4	5	3.74	-1.26		
Assurance(ASS)	ASS 1	4.24	3.71	-0.53	-4.63	-1.16
	ASS 2	5	3.82	-1.18		
	ASS 3	5	3.41	-1.59		
	ASS 4	5	3.67	-1.33		
Empathy(EMP)	EMP 1	5	3.78	-1.22	-7.24	-1.45
	EMP 2	5	3.48	-1.52		
	EMP 3	5	3.57	-1.43		
	EMP 4	5	3.58	-1.42		
	EMP5	5	3.35	-1.65		
Total						-6.30

Source: Questionnaire Survey, 2016

It was found in general that perceptions of customers on GSM service quality provided by Nepal Telecom did not meet the expectations as all gap scores of different dimensions are negative. Total average gap score of (-6.30) between the expectation and perception of GSM service quality of Nepal Telecom also signaled that overall satisfaction level of NT customers is not good. Analysis and descriptions of average gap scores of the all five SERVQUAL dimensions can be presented below.

a. Tangibles (TAN)

Average customers are not satisfied with the level of GSM services offered by Nepal Telecom as overall gap score is (-6.55) and the highest average gap score of (-1.64). Since it is seen that customers are not satisfied with the GSM service of Nepal Telecom, up to date equipment and physical facilities virtually appealing, well dressed and neat employees and clean physical environment should be given priority by Nepal Telecom to enhance the level of customer satisfaction.

b. Reliability (REL)

Gap score of (-4.53) is obtained by this dimension with the lowest average gap score of (-0.93). This means that Nepal Telecom is expected to be more reliable to satisfy the customer through GSM service quality. When they promise to do something by a certain time, they do it, when a customer have a problem they should show science interest in solving the problem, they perform the service right the first time, they provide their services at the time they promise to do so and they keep their records accurately are the items under this dimension to be focused to improve by Nepal Telecom.

c. Responsiveness (RES)

Responsiveness dimension with the gap score of (-4.54) and an average gap score of (-1.14) showed that customers of GSM service of Nepal Telecom are not well satisfied. So Nepal Telecom should know that customers expect more in Nepal Telecom on the items of employees make information easily obtainable by customers, employees give prompt service to customers, employees are always willing to help customers and employees are never too busy to respond to customers business.

d. Assurance (ASS)

Assurance obtain gap score of (-4.63) and an average gap score of (-1.16). This finding reveals that customers are dissatisfied with the behavior of employees in Nepal Telecom

to the customers. Nepal Telecom should introduce activities and trainings to employees to improve the following items under assurance dimensions. They are the behavior of employees instill confidence in customers, customers feel safe with Nepal Telecom employee transaction in the customer service centers, employees are polite with the customers and employees of Nepal Telecom have the enough knowledge to answer customers questions.

e. Empathy (EMP)

This dimension had the highest overall gap score of (-7.24) and the second highest average gap score of (-1.45). It is understood that customer satisfaction with GSM service quality of Nepal Telecom based on items of empathy dimension is weak. So Nepal Telecom should improve the level of GSM service quality by giving customers individual attention, making operating hours convenient to customers, providing customers individual service by employees, putting customers interest at heart and understanding the specific needs of the customers.

4.5 Service Quality Dimensions and Its Average Score in Ranking

Customers' perceptions and expectations variation on GSM service quality of Nepal Telecom through SERVQUAL model from five different dimensions with twenty different items under them are ranked as per their average gap score in the table 4.5 below. It is seen that customer perceived GSM service quality of Nepal Telecom as weak in all dimensions. It means customers' expectations fall sort of their real perception or experience in the GSM service. Customers were not satisfied with any dimension of service quality. Gap is seen between expected and perceived service quality. It signifies the need to make improvement in all dimensions by Nepal Telecom to minimize gaps leading to better level of customer satisfaction.

Table 4.5: Service Quality Dimensions and Its Average Score in Ranking

SERVQUAL Dimensions	No. of Items	Overall Gap Score	Average Gap Score	Ranking
Reliability (REL)	5	-4.53	-0.91	1
Responsiveness (RES)	4	-4.54	-1.14	2
Assurance (ASS)	4	-4.63	-1.16	3
Empathy (EMP)	5	-7.24	-1.45	4
Tangibles	4	-6.55	-1.64	5

Source: Questionnaire Survey, 2016

4.6 Level of GSM Customer Satisfaction in Nepal Telecom

It was also asked to the respondents to mention the level of customer satisfaction on different determinant factors for the GSM services provided by Nepal Telecom. All the respondents had been using GSM service of Nepal Telecom when they were asked to express their level of satisfaction. About 87 percent respondents started using GSM service of NT more than 5 years before. So their response on perception of GSM services of NT under scrutiny of network coverage, strength of signal, tariff, availability of recharge cards/means of payment, customer service and service promotion or marketing are analyzed below.

4.6.1 Network Coverage

One of the major determinants of customer satisfaction in the field of telecommunication service is network coverage. Satisfaction level of respondents on the network coverage of GSM service of Nepal Telecom is shown in the table 4.6.1.

Table 4.6.1: Satisfaction on Network Coverage

Satisfaction Level	Frequency	Percentage
Very satisfied	17	14.17
Somewhat Satisfied	65	54.17
Neutral	4	3.33
Somewhat Dissatisfied	28	23.33
Very Dissatisfied	6	5.00
Total	120	100

Source: Questionnaire Survey, 2016

More than half of the respondents (54.17%) are satisfied with the GSM network coverage quality of Nepal Telecom. Noticeable numbers of respondents (28.33%) are not satisfied with the coverage of GSM network of Nepal Telecom. Only (14.17%) of the respondents are very satisfied with the coverage of GSM network. It is also seen that more than two thirds of the respondents (68.34%) are satisfied with the coverage of GSM network.

4.6.2 Signal Strength

Signal strength is another determining factor of service quality and customer satisfaction. Success of call connection, connection time, indoor and outdoor coverage, voice clarity, rate of call drop, data connection, data speed and data signal are highly based on strength of GSM signal. As signal strength determines many directly experienced features of GSM service quality by users, the satisfaction level of the service is also very dependent on signal strength.

Table 4.6.2: Satisfaction on Signal Strength

Satisfaction Level	Frequency	Percentage
Very satisfied	14	11.67
Somewhat Satisfied	54	45.00
Neutral	7	5.83
Somewhat Dissatisfied	31	25.83
Very Dissatisfied	14	11.67
Total	120	100

Source: Questionnaire Survey, 2016

It is not a negligible percentage (37.5%) of respondents who are dissatisfied with signal strength of GSM service of Nepal Telecom although majority of the respondents are satisfied with it since it constitute 56.67 percentage as 11.67 percent are very satisfied and 45 percent are somewhat satisfied.

4.6.3 Tariff

Tariff here is used for different cost and pricing related features of subscribing and using GSM services of Nepal Telecom. It includes the initial purchase of simcard, price paid to obtain access to the network, call rate, pulse rate, data cost, packages, SMS charges and price fairness as well. Tariff which includes all the price related constituents of customer satisfaction is one of the major determinants to be studied.

Table 4.6.3: Satisfaction on Tariff

Satisfaction Level	Frequency	Percentage
Very satisfied	8	6.67
Somewhat Satisfied	42	35.00
Neutral	11	9.16
Somewhat Dissatisfied	36	30.00
Very Dissatisfied	23	19.17
Total	120	100

Source: Questionnaire Survey, 2016

When respondents were asked for their opinion on the tariff of GSM service of Nepal Telecom, response of mixed perceptions had been found. Nearly majority of the respondents wanted the decrement on the tariff of the service as 49.17 percent are not satisfied with the pricing. Only 35 percent and 6.67 percent of the respondents are satisfied and very satisfied respectively.

4.6.4 Availability of Recharge Card/Means of Payment

It is another primary concern for subscribers about the availability and user friendliness of payment means. Availability of recharge cards, E-payment, counter payment, payment through

bank and easiness on recharge system and E-payment are factors for satisfaction or dissatisfaction caused by payment related perception.

Table 4.6.4: Satisfaction on Availability of Recharge Card/Mean of Payment

Satisfaction Level	Frequency	Percentage
Very satisfied	43	35.83
Somewhat Satisfied	66	55.00
Neutral	2	1.67
Somewhat Dissatisfied	7	5.83
Very Dissatisfied	2	1.67
Total	120	100

Source: Questionnaire Survey, 2016

It is the opinion of respondent that NT customers are satisfied with availability of recharge card or means of payment of GSM service as 55 percent and 35.83 percent of respondents are satisfied and very satisfied when asked about satisfaction on means of payments. Only 7.50 percent of customers are not satisfied with the payment related service of Nepal Telecom.

4.6.5 Customer Care Service

Customer care or customer support and complain management system is also one of the most important factors for customer satisfaction. It includes availability customer care centers as well as the promptness, attitude; competence of the service center employees to handle complains and inquires, to provide information and to solve problems of the customers related to the service.

Table 4.6.5: Satisfaction on Customer Care/Service

Satisfaction Level	Frequency	Percentage
Very satisfied	3	2.50
Somewhat Satisfied	24	20.00
Neutral	13	10.83
Somewhat Dissatisfied	57	47.50
Very Dissatisfied	23	19.17
Total	120	100

Source: Questionnaire Survey, 2016

The opinion of respondents on this very important component of customer satisfaction was found very poor. More than two thirds of the respondents with 66.67 percent expressed their dissatisfaction on very weak customer care services provided by Nepal Telecom to the GSM subscribers. Only 20 percent customers are satisfied with the customer care service. It's a tiny percentage of 2.5 respondents responded that their satisfaction level on customer care or service of Nepal Telecom with very satisfied. Even combining both the satisfied and very satisfied respondents, only 22.5 percent are satisfied with customer service provided by Nepal Telecom to the GSM users. In other words the customer care department of Nepal Telecom had not met the customers' expectation to a large extent.

4.6.6 Service Promotion/Marketing

Service promotion or marketing is also an important determinant of customer satisfaction. It is related with timely up to date information related to services to the customers about service activation procedure, price rates and benefits to the customers. Information through official websites, advertisements, messages and brochures about services, new offers and packages regarding purchase, price, activation, use, validity and advantages in a user friendly process to the existing as well as potential new customers in an attractive way is covered by service promotion or marketing.

Table 4.6.6: Satisfaction on Service Promotion/Marketing

Satisfaction Level	Frequency	Percentage
Very satisfied	5	4.17
Somewhat Satisfied	34	28.33
Neutral	9	7.50
Somewhat Dissatisfied	43	35.83
Very Dissatisfied	29	24.17
Total	120	100

Source: Questionnaire Survey, 2016

More than majority of the respondents with 60 percent are not satisfied with service promotion or marketing information provided by Nepal Telecom to the GSM customers. Insufficient or lack of information related to the existing and new service, packages and offers about GSM service to

the customer caused this level of dissatisfaction on service promotion by Nepal Telecom. Only 28.33 percent and 4.17 percent of respondents are somewhat satisfied and very satisfied with this component of customer satisfaction provided by Nepal Telecom.

4.7 Improving Customer Satisfaction with NT GSM Service

The respondents were asked at the end of the questionnaire to briefly write their ideas in points as suggestions to improve the level of service quality and customer satisfaction on GSM service of Nepal Telecom. The responses that included different opinions of the respondents in some major points are summarized in the table 4.7 below.

Table 4.7: Improving Customer Satisfaction

Improvement Measures	Frequency	Percentage
Focus on Data Service (3G, 4G)	113	94.17
Customer Care Service Improvement	109	90.83
Improvement of Network Coverage and Strength	102	85.00
Marketing/Promotion of Service	98	81.67
Lowering the Price of Products and Tariff of Services	93	77.50
Expansion of Services	71	59.17
Bundling Services with Quality Cell Phones	28	23.33

Source: Questionnaire Survey, 2016

As the satisfaction level of GSM customers on different determinants of GSM service of Nepal Telecom were presented above, the respondents provided the opinions particularly to improve the quality and level of the same factors to enhance and increase the level of satisfaction in Nepal Telecom's GSM service customers. Almost 95 percent of the respondents opined on the importance of GSM data service by Nepal Telecom by improving quality of 3G and introducing quality 4G (LTE) data services. Similarly, 90.83 percent of the respondents made focus to improve and establish advance customer care centers for better customer service and customer satisfaction. Other measures of improving network coverage and strength, marketing/promotion of service, lowering of price of product and tariff of services, expansion of services and bundling services with quality cell phones are focused to be improved in the opinions of respondents with 85%, 81.67%, and 77.5%, 59.17% and 23.33% respectively.

CHAPTER FIVE

SUMMARY AND CONCLUSION

5.1 Summary

Analysis carried out to find out answers to research questions and fulfill the purpose of the study has found out the customers perceptions of GSM service quality of Nepal Telecom, factors affecting customers' satisfaction, highly contributing dimensions to customers satisfaction and the measures to improve the level of customers satisfaction for GSM service of Nepal Telecom. Finding from analysis through SERVQUAL model regarding service quality for GSM service of Nepal Telecom revealed that overall service quality is perceived low by the customer. Weak perception of service quality guided to the low level of customer satisfaction. Customers of GSM service of Nepal Telecom have higher expectation than their actual experience of the service quality. The gap score analysis was carried out to provide answer to the main research questions regarding the perception of service quality. The overall perception of service quality is low because expectations on service quality exceeded perceptions. This implied that the demands of the customers are more than the offers provided by Nepal Telecom. The clear negative gap between perception and expectation represents that customers are not satisfied. Most of the SERVQUAL dimensions could not contribute well to customer satisfaction. The findings on the factors affecting satisfaction for GSM service of Nepal Telecom have clear implication that most of the customers are not very happy with Nepal Telecom customer care service, service promotion or marketing and signal strength of the GSM service.

Result of the study shows that Nepal Telecom has to improve performance on almost all the dimensions of service quality to increase the level of customer satisfaction despite variations in the present levels of service quality and satisfaction. Customers have expected more than what is being provided to them on each factors of customer satisfaction regarding GSM service. By improving customer care service network coverage and strength, data service, marketing of service, lowering tariff and expanding services, Nepal Telecom can strengthen the service quality and level of customer satisfaction.

Five point Likert Scale was used to measure both the expectations and perceptions on GSM service quality of Nepal Telecom. The perception minus expectation (P- E) scores of all the 22

items from 5 dimensions of tangibles, reliability, responsiveness, assurance and empathy were negative signaling that customers are not getting what they expect from GSM service of Nepal Telecom. Gap scores and average gap scores analysis revealed that GSM service of Nepal Telecom best performed in reliability and worst performed in tangibles dimensions of SERVQUAL model. Reliability dimension is related to the ability to perform the promised services dependably and accurately whereas tangibles dimension is physical facilities and employee appearance related one. As received from respondents on six different determinants of GSM service quality of Nepal Telecom shows that the level customer satisfaction on customer care and service promotion related performance are very weak in Nepal Telecom. More than two thirds of the respondents are dissatisfied with customer care service and 60 percent are dissatisfied with service promotion activities by Nepal Telecom. The customer of GSM service of Nepal Telecom are seen relatively more satisfied on availability of recharge cards or means of payment and network coverage and strength than on customer care and service promotion. Respondents also provided opinions as suggestions for improvement measures of GSM service quality of Nepal Telecom. The highest focuses are on high quality mobile data service and improvement of as well as establishing customer care centers with capacity of successfully handling customer grievances and complaints. The other main focuses are network quality, service promotion and expansion, tariff reduction and bundling service.

5.2 Conclusion

The prime objective of this study was to assess service quality and customer satisfaction with GSM service of Nepal Telecom's current business set ups. It also reveals how GSM customers of Nepal Telecom perceive service quality provided. This study also aimed at knowing the applicability of SERVQUAL model using its all the five dimensions and 22 items to measure service quality of GSM service. The other main objectives were to identify determinant factors those affect satisfaction with GSM service of Nepal Telecom and the measures to be taken for improving level customer satisfaction different areas of GSM service quality. These objectives were to be achieved by analyzing the customers' expectations and perceptions of GSM service quality. Measuring service quality helps management of the service providers to provide reliable data that can be used to monitor, maintain and improve service quality. Findings show that GSM

customers of Nepal Telecom expect more than what they really perceive from the experience based NT performance.

Only the careful and focused strives towards improvement in all the service quality dimensions and determinants by Nepal Telecom can improve the level of customer satisfaction with GSM service. Focus and efforts to improve measuring factors of quality service for better performance would direct towards higher level of perception on service quality followed by higher level of customer satisfaction. Nepal Telecom's focus on improvement of service quality by giving priority to 3G/4G data service, improving customer care services, marketing of services and offers in customer friendly way, enhancing call quality and network coverage, implementing reasonable pricing, expanding services and introducing service bundled with quality cell phones can definitely enrich service quality and customer satisfaction.

The present service quality and customer satisfaction with NT GSM services has been found at the weak level through the analysis of perceptions as well as the expectations of the customers. The weakest dimension of NT GSM service is found to be of tangibles of SERVQUAL model and customer care service from the GSM service quality determinants followed by provision of service related basic information to the customers. For improved service quality, Nepal Telecom should not rely only on profit margins as a good indicator of business performance, but also develop strategies that would enhance customer's perception standards, service quality and customer satisfaction. Therefore, the weak level of overall service quality and customer satisfaction of NT GSM service of Nepal Telecom can only be improved through careful and efficient efforts of rendering customer centric advance GSM services meeting the demands of both the customers and the time. Regarding the significance and appropriateness of the SERVQUAL model on the study of service quality and customer satisfaction, it has been realized that this model would be better applicable on such issues with comparative study. This kind of comparative study of two or more telecom companies in Nepal can be an issue of future research studies.

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Questionnaire

A Survey Questionnaire on Customer Satisfaction with GSM (Global System of Mobile) Service Quality: A Case Study of Nepal Telecom

Dear Sir/Madam,

I would like to request you to fill up this questionnaire designed to fulfill the partial requirement of M Phil in Public Administration from Faculty of Management, Tribhuvan University, Kathmandu, Nepal.

The responses you provide will be kept quiet confidential and will be used at aggregate level only. Your earliest response is highly appreciated.

Binod Acharya
M Phil Scholar
Tribhuvan University
Kathmandu

Section A: Profile of the Respondent

1. Name of the Respondent (Optional):
2. Age :years
3. Gender: Male Female
4. Education : Illiterate Under SLC SLC 10+2/PCL
 Bachelors Masters M Phil PHD
5. Occupation : Agriculture Salaried Job Business
 Student Others
6. How long have you been using GSM service of Nepal Telecom? For(Years/ Months)
7. Monthly Expenditure on GSM service of Nepal Telecom: Rs.(Please mention)

Section B: Expectations

Your opinion on GSM service of Nepal Telecom is dealt in this section. Please, express your opinion showing the extent to which you think Nepal Telecom should possess the following features on ideal GSM service.

Instructions: You should rate how strongly you agree or disagree with the following statements by placing only one **tick mark (✓)** in the respective box.

<i>Statements (SERVQUAL Items)</i>	<i>Strongly Agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly Disagree</i>
1. Ideal Nepal Telecom should have modern equipments.					
2. Their physical facilities should be visually appealing.					
3. Their employees should be well dressed and appear neat.					
4. Their physical environment is clean.					
5. When provider promises to do something by a certain time, they should do so.					
6. When a customer has a problem, a provider should show a sincere interest in solving it.					
7. Provider should perform the service right the first time.					
8. They should provide their services at the time they promise to do so.					

9. They should keep their records accurately.					
10. Employees should make information easily obtainable by the customers.					
11. Employees should give prompt service to customers.					
12. Employees are always willing to help customers.					
13. Employees in Nepal Telecom should never be too busy to respond to customers' requests.					
14. The behavior of employees in Nepal Telecom should instill confidence in customers.					
15. Customers should be able to feel safe in their transactions with Employees in the counters.					
16. Their employees should be polite.					
17. Employees of Nepal Telecom should have the knowledge to answer customers' questions.					
18. Provider should give customers individual attention.					
19. Their operating hours should be convenient to all their customers.					
20. Employees should give customers personal service.					
21. Service providers have their customers' interest at heart.					
22. The employees should understand the specific needs of their customers.					

Section C: Perceptions

The perception of GSM service of Nepal Telecom experienced is dealt in this section. Please, show the extent to which the following statements reflect your perception based on real performance based experience of GSM service of Nepal Telecom.

Instructions: Please, rate how strongly you agree or disagree with the following statements by placing only one **tick mark (✓)** in the respective box.

<i>Statements (SERVQUAL Items)</i>	<i>Strongly Agree</i>	<i>Agree</i>	<i>Neutral</i>	<i>Disagree</i>	<i>Strongly Disagree</i>
1. Ideal Nepal Telecom has modern equipments.					
2. Physical facilities of Nepal Telecom are visually appealing.					
3. NT employees are well dressed and appear neat.					
4. Physical environment of Nepal Telecom is clean.					
5. When NT promises to do something by a certain time, they do so.					
6. When a customer has a problem, NT shows a sincere interest in solving it.					
7. NT performs the service right the first time.					
8. NT provides their services at the time they promise to do so.					
9. NT keeps their records accurately.					
10. NT employees make information easily obtainable by the customers.					
11. NT employees give prompt service to customers.					
12. NT employees are always willing to help customers.					
13. NT employees are never too busy to respond to customers' requests.					
14. The behavior of NT employees instills confidence in customers.					
15. Customers feel safe in their transactions with NT employees in the counters.					
16. NT employees are polite.					
17. NT employees have the knowledge to answer customers' questions.					

18. NT gives customers individual attention.					
19. NT operating hours is convenient to all their customers.					
20. NT employees give customers personal service.					
21. NT has their customers' interest at heart.					
22. NT employees understand the specific needs of their customers.					

Section D: Overall Satisfaction

This section deals with the overall satisfaction level of customers with GSM service of Nepal Telecom in respect to different determinants categories of customer satisfaction.

Instructions: Please, choose only one appropriate answer by putting a **tick mark (✓)** in the respective box.

<i>Determinant of Customer Satisfaction on GSM Service</i>	<i>Very Satisfied</i>	<i>Somewhat Satisfied</i>	<i>Neutral</i>	<i>Somewhat Dissatisfied</i>	<i>Very Dissatisfied</i>
Network Coverage/Quality					
Signal Strength (Voice + Data)					
Tariff					
Availability of Recharge Cards/Mean of Payment					
Customer Care					
Promotion/Marketing of Service					

Please briefly write your ideas in points as suggestions to improve GSM service quality and customer satisfaction of Nepal Telecom.

- | | |
|---|---|
| <ul style="list-style-type: none"> • • • | <ul style="list-style-type: none"> • • • |
|---|---|

Thank you for your cooperation.

Annex 1: Milestones of Nepal Telecom

- 2016 - - - - - NT pro service launched
- 2015 - - - - - Social Site "Meet" launched
- 2015 - - - - - FTTH service launched
- 2014 - - - - - Wi-Fi Hotspot, NT Official Mobile App
- 2013 - - - - - IP-Based Wire line Network (NGN) Service launched
- 2012 - - - - - Convergent Real Time Billing and Customer Support System Launched
- 2012 - - - - - IP-CDMA System commissioned
- 2012 - - - - - WiMAX 4G Service launched
- 2011 - - - - - GSM 3G Data Card Service introduced
- 2011 - - - - - First International Carrier Partner's Meet organized by NT
- 2011 - - - - - Launching of GSM 3G Data Only Service
- 2011 - - - - - Launching of Easy Phone SIP PPP Service
- 2010 - - - - - Launching of Easy Phone SIP Easy Call Service
- 2010 - - - - - Soft Launch of Easy Phone IP Call Service
- 2010 - - - - - EVDO Service started
- 2009 - - - - - Postpaid CDMA Mobile Service started
- 2009 - - - - - SMS Service from GSM to CDMA mobile started
- 2009 - - - - - IVR 1606 Service extended outside Kathmandu Valley
- 2009 - - - - - IVR 198 Service extended outside KTM valley
- 2008 - - - - - PSTN VMS - Notice Board Service Launched
- 2008 - - - - - IVR 198 service extended for ADSL Fault Complaint Registration
- 2008 - - - - - IVR Service 1607 started for GSM and CDMA PUK Enquiry
- 2008 - - - - - Broadband ADSL Service launched
- 2007 - - - - - GPRS, 3G and CRBT Services introduced in GSM Mobile
- 2007 - - - - - VOIP Call Complaint Registration started via 188 IVR Service
- 2007 - - - - - PSTN Bill Enquiry Service started via 1606 IVR Service
- 2007 - - - - - Expansion of Internet Bandwidth via Optical link between Nepal & India
- 2007 - - - - - National Roaming for CDMA Mobile (Sky Phone) started
- 2006 - - - - - CDMA Limited Services in Kathmandu Valley

- 2006 - - - - - MCC (198) Complaint Registration via IVR in Kathmandu Valley
- 2006 - - - - - Home Country Direct Service – Nepal Direct (IN)
- 2006 - - - - - PSTN Credit Limit Service - PCL (IN)
- 2005 - - - - - Outsourcing of Enquiry Service (197)
- 2005 - - - - - Access Network Services
- 2005 - - - - - Soft launch of CDMA
- 2004 - - - - - Pre-paid Calling Card Service (IN Services)
- 2004 - - - - - NEPAL TELECOM (Transformation from Corporation to Nepal Doorsanchar Company Limited)
- 2003 - - - - - GSM Prepaid Service
- 2002 - - - - - East West Highway Optical Fiber Project
- 2001 - - - - - Launching of Payphone Service
- 2000 - - - - - Launching of Internet Service
- 2000 - - - - - Implementation of SDH Microwave Radio
- 1999 - - - - - Launching of GSM Mobile service
- 1998 - - - - - Direct Link with Bangladesh
- 1997 - - - - - Digital Link with D.O.T. India through Optical Fiber in Birgunj - Raxual
- 1996 - - - - - Introduction of VSAT services
- 1996 - - - - - Independent Int. Gateway Exchange established
- 1996 - - - - - Automation of the entire Telephone Network
- 1996 - - - - - Conversion of all Transmission link to Digital transmission link
- 1995 - - - - - Installation of Optical Fiber Network
- 1987 - - - - - Commencement of STD service
- 1984 - - - - - Reliable Rural Telecom Service (JICA)
- 1984 - - - - - Commencement of STD service
- 1983 - - - - - Establishment of digital Telephone Exchange
- 1982 - - - - - Establishment of SPC telex exchange
- 1982 - - - - - Establishment of Standard "B" Type Earth Station for international circuits
- 1974 - - - - - Microwave transmission links establishment for internal trunk
- 1971 - - - - - Introduction of Telex Services
- 1965 - - - - - First Automatic exchange in Nepal (1000 lines in Kathmandu)

- 1964 - - - - - Beginning of International Telecommunications Service using HF Radio to India and Pakistan
- 1962 - - - - - First Public Telephone Exchange in Kathmandu (300 lines CB)
- 1955 - - - - - Distribution of telephone line to general public
- 1951 - - - - - Installation of Open Wire Trunk line from Kathmandu to Palpa
- 1950 - - - - - Establishment of CB telephone exchange (100 lines) in Kathmandu
- 1950 - - - - - Introduction to High frequency Radio System (AM)
- 1950 - - - - - Establishment of Telegram Service
- 1936 - - - - - Installation of Open Wire Trunk line from Kathmandu to Dhankuta
- 1935 - - - - - Installation of 25 lines automatic exchange in Royal Palace
- 1916 - - - - - Establishment of Open wire Trunk Link from Kathmandu to Raxaul (India)
- 1916 - - - - - Establishment of first telephone lines in Kathmandu