

# Management of Service Quality With Involvement of Technological Developments in Organizations

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## ABSTRACT

Service companies should generate and deliver superior services and manage service quality. The objective of the study is to analyze the various aspects of management of service quality. The methodology adopted is a conceptual analysis of managing service quality in organizations. Companies should manage customer expectations and product-service bundles. They should appreciate and involve technological developments and information technology in management of service quality. They should implement self-service technologies and chatbots to improve service quality. Academicians may analyze the various aspects of management of service quality and suggest effective models. Practicing managers should manage customer expectations and product-service bundles, appreciate the involvement of technological developments, and implement latest technological developments like self-service technologies and chatbots for managing service quality effectively. All these initiatives will help companies to manage service quality, deliver superior services, and to achieve growth and business excellence.

## KEYWORDS

Chatbots, Customer Expectations, Information Technology, Product-Service Bundles, Self-Service Technologies, Technological Developments

## 1. INTRODUCTION

It is imperative for organizations to differentiate their offerings from the offerings of their competitors (Momsen, 2021). Companies find it tougher to differentiate their physical products. Consequently, they turn to differentiation of services (Tolstoy, Hånell, & Özbek, 2022). Differentiation of services may include on-time delivery, better and faster response to inquiries, or quicker resolution of complaints (Andaleeb, 2016). Companies which excel in generation and delivery of services understand the advantages of service differentiation and its value in creating memorable customer experiences (Sahi, Devi, Gupta, & Cheng, 2022). So, it is critical to understand the special nature of services and what that means to marketers.

DOI: 10.4018/IJTD.319975

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Service quality is important in the generation and delivery of superior services (Chathoth, Chan, Harrington, Okumus, & Song, 2022). Quality of the services delivered is verified at each stage of the generation and delivery of services. Companies apply the latest technologies which are available to deliver superior services. Such technologies include self-service technologies like automated teller machines (ATMs), various apps, vending machines, and self-checkout facilities at hotels. In all such applications, information technology acts as an enabler (Hassan & Farmanesh, 2022). Companies desirous of generating and delivering superior services should realize the importance of information technology.

The discussions indicate the importance of generation and delivery of superior services. The roles and involvement of information technology in the generation and delivery of superior services cannot be overemphasized. The latest developments in information technology also allow companies to manage service quality in their organizations. Although the topic is important and requires further investigation, few studies focus on the management of service quality and the involvement of information technology in the generation and delivery of superior services and in the management of service quality. The study aims to address this research gap.

The objective of the study is to analyze the various aspects of generation and delivery of superior services by companies. The roles and responsibilities of management of service quality in the process is discussed. The involvement of information technology in the management of service quality is discussed.

The methodology adopted is a conceptual analysis of the various aspects of generation and delivery of superior services, the importance of management of service quality, and the roles of information technology in the process. Research papers on the topic published in reputed academic journals are referred to for conducting the analysis. The contents of the research papers are analyzed conceptually. Examples of companies achieving excellence in service quality are cited wherever applicable. Primary data is not collected and empirical analysis is not done.

The novelty and the contributions of the study lie in the fact that an in-depth conceptual analysis of the roles of management of service quality in the generation and delivery of services is done. Academicians may analyze the various aspects and suggest models and practices which will be effective in managing service quality. Practicing managers will understand the importance of managing service quality and of delivering superior services. They should appreciate the involvement of technological developments and information technology in the management of service quality. They should encourage the applications of self-service technologies and chatbots in the process. All these initiatives will enable companies to deliver superior services and to achieve growth and business excellence in the long run.

The study is structured as follows:

Section 2 discusses about the management of service quality in organizations. Management of customer expectations is discussed in section 3. Managing service quality and management of product-service bundles are discussed in sections 4 and 5 respectively. Section 6 discusses about the involvement of technological developments and information technology in the management of service quality with sub-sections 6.1 and 6.2 highlighting the management of self-service technologies and emergence of contact centres with chatbots respectively. Various initiatives adopted by companies with respect to management of service quality are discussed in section 7 with sub-sections 7.1 and 7.2 highlighting the initiatives adopted by American Express and SBI YONO respectively. The salient points of the study are discussed in section 8 with sub-sections 8.1 and 8.2 highlighting the theoretical implications and the managerial implications of the study respectively. Section 9 concludes the study with sub-sections 9.1 and 9.2 highlighting the limitations of the study and the avenues of future research respectively.

## **2. MANAGEMENT OF SERVICE QUALITY IN ORGANIZATIONS**

The service quality provided by organizations is checked and verified at each service encounter and at all customer touch points (Wirtz & Lovelock, 2021). For example, if employees are bored, cannot

answer simple questions, or are visiting with each other while customers are waiting, customers will think twice about doing business there again. Organizations involved in delivering services should aim to serve ideal output of flawless service delivery (Rösler, Osterrieder, & Friedli, 2021). Companies offering services should focus on certain aspects for managing service quality. These include managing customer expectations and incorporating self-service technologies (Chiu & Nguyen, 2022).

### 3. MANAGEMENT OF CUSTOMER EXPECTATIONS

Customers develop expectations about services from several sources. These sources may include experience, word of mouth, and advertising (Rahmatulloh & Melinda, 2021). In general, individuals form expectations about services by comparing the perceived and expected services. If the perceived service falls below the expected service, customers are disappointed. On the other hand, customers are satisfied or delighted when the perceived service is more than the expected service (Rahmatulloh & Melinda, 2021). Successful companies aim to add benefits to their offerings that not only satisfy customers but also surprise and delight them by exceeding expectations (Mandal, 2022). Many companies like American Express and SBI YONO from India develop their businesses around exceeding customer expectations.

Companies providing services should understand and apply the service-quality model for delivering high service quality (Chen, Wang, Lyu, & Zhang, 2022). They should understand the gaps which prevent superior and successful service delivery. These gaps include gap between consumer expectations and management perception, gap between management perception and service-quality specifications, gap between service quality specifications and service delivery, gap between service delivery and external communications, and gap between perceived and expected service (Raphael, Samuel, & Dipeolu, 2022).

Researchers have conducted extensive work to validate the roles of expectations in interpretations by consumers and evaluations of the service encounter and in the relationships which they adopt with a firm over time (Ahuja & Alavi, 2022). Consumers are often forward-looking in terms of their likely behaviour and interactions with a firm when deciding whether to keep or to drop a service relationship (Ahuja & Alavi, 2022). A service relationship is strengthened when companies focus on those marketing activities which have positive effects on current or expected future usage (Ekakitie-Emonena & Alagba, 2022).

Services such as public utilities, healthcare, financial and computing services, insurance, and other professional, membership, or subscription services are offered continuously (Katzan Jr., 2018). For such services, customers mentally calculate the perceived economic benefits relative to the economic costs. In other words, customers may ask themselves, “Am I using this service enough, given what I pay for it?” If the customer receives a negative response, then the customer may have changed behaviour and may also think of terminating an account (Katzan Jr., 2018).

Companies providing services should consider and analyze the negative aspects of long-term service relationships (Korkeamäki, Sjödin, Kohtamäki, & Parida, 2022). For example, a client of an advertising agency may feel that over time the agency is losing objectivity, becoming stale in its thinking, or beginning to take advantage of the relationship.

### 4. MANAGING SERVICE QUALITY

Researchers have studied and analyzed the service quality model and have identified five determinants of service quality. These determinants include reliability, responsiveness, assurance, empathy, and tangible – in descending order of importance (Yarimoglu, 2014).

The SERVQUAL scale consisting of 21 items is developed by researchers based on the five determinants (Parasuraman, Berry, & Zeithaml, 2022). Researchers have also identified a zone of tolerance, a range in which a service will be considered satisfactory. The range may vary from the minimum level of service that consumers are willing to accept and at the other end, by the level they believe can and should be delivered (Hussain, Konar, Nair, & Ragavan, 2021).

Researchers have extended the research on service-quality model. They have developed one dynamic process model of service quality. The model assumes that perceptions and expectations of customers regarding service quality change over time (Lee, 2022). However, at any given point, they are a function of prior expectations about what *will* and what *should* happen during the service encounter, and the *actual* service delivered during the last contact (Lee, 2022). Research on the dynamic process model reveals that the two different types of expectations have opposite effects on perceptions of service quality. Consequently, if customers have *increasing* expectations regarding what the firm *will* deliver may lead to improved perceptions of overall service quality (Lee, 2022). On the other hand, if customers have *decreasing* expectations of what the firm *should* deliver, then such expectations may lead to improved perceptions of overall service quality (Lee, 2022).

## 5. MANAGEMENT OF PRODUCT-SERVICE BUNDLES

Product-based industries and service-based industries are equally important (Vijayalakshmi, 2022). Both the industries together should provide a service bundle. Manufacturers of equipment – ranging from small appliances and office machines to tractors, mainframes, and airplanes – must all provide product-support services. Product-support services provide competitive advantage to companies (Hydle, Hellström, Aas, & Breunig, 2021). At present, many product companies have online presence. Such companies try to ensure that in addition to physical products, they are also able to offer adequate, if not superior, service online as well (Piercy, 2006).

Product companies may provide augmentation in products with key service differentiators (Dutta, 2015). These differentiators may cover areas such as ordering, delivery, installation, customer training, customer consulting, maintenance, and repair (Dutta, 2015). There are companies which manufacture equipment and which generate a significant percentage of their profits from these services (Dutta, 2015). In the global context, companies offering physical products should also be able to provide superior service support. Other such product companies are seriously disadvantaged (Venkatesh, 2022).

Departments providing customer services may vary greatly on the quality of service provided (Liao, Soltani, & Wilkinson, 2021). At one extreme are customer-service departments which only transfer customer calls to the appropriate persons for actions with little follow-up. At the other extreme, there may be customer-service departments which are eager to receive customer requests, suggestions, and even complaints. Such departments strive to handle the complaints expeditiously (Liao et al., 2021). There are some firms which even proactively contact customers to provide service after the sale is complete (Liu & Kao, 2022).

Manufacturing companies start by running their own parts-and-service departments. The companies stay close to the equipment and try to have a proper and thorough understanding of the issues. They realize that it is expensive and time-consuming to train others. So, they perform the jobs themselves and make good money from parts and services. This is more the case if the company is the only supplier. Consequently, the company can charge a premium price (Mogaka, Odari, & Arani, 2022). There are many equipment manufacturers which price their equipment low and compensate by charging higher prices for parts and service (Huo, 2021).

In the long run, manufacturing companies tend to switch more maintenance and repair service to authorized distributors and dealers (Huo, 2021). Such intermediaries stay closer to customers, operate in more locations, and offer faster service. However, there may be independent service firms which emerge and offer a lower price or faster service (Huo, 2021). A significant percentage of auto-service work is done at present outside franchised automobile dealerships by independent garages and chains such as Midas Muffler and Jiffy Lube. Organizations which provide independent services handle servers, telecommunications equipment, and a variety of other equipment lines (Vielma, Romo, & Pérez, 2022).

Customers have increasingly number of choices and options when they ask for services (Cui & Xu, 2022). Consequently, equipment manufacturers should figure out how to make money on their equipment, independent of service contracts. At present, automobile companies may provide

warranties of newly-purchased car for the initial 100000 miles travelled before customers have to pay for servicing (Ruan, Wu, & Luo, 2022). On the other hand, customers are reluctant to pay 2 percent to 10 percent of the purchase price every year for service with the introduction of disposable or never-fail equipment (Ruan., 2022). Consequently, a company with several hundred laptops, printers, and related equipment may find it cheaper to have its own service people on-site (Ruan., 2022).

## **6. INVOLVEMENT OF INFORMATION TECHNOLOGY IN MANAGEMENT OF SERVICE QUALITY**

Technological developments and information technology play major roles in the generation and delivery of services and in the management of service quality (Elziny & Mohamed, 2022). Companies providing services utilize several technological developments so that the service quality is superior. These may include management of self-service and emergence of contact centres with chat bots (Wirtz & Kowalkowski, 2022).

### **6.1. Management of Self-Service Technologies**

Customers prefer convenience and control in services. They prefer self-service technologies to person-to-person service interactions because self-service provides convenience and control to customers (Ugwuanyi & Idoko, 2022). For example, in addition to traditional vending machines, customers may opt for automated teller machines (ATMs), self-service at gas pumps, self-checkout at hotels, and a variety of activities on the internet. These activities may include ticket purchasing, investment trading, and customization of products (Ugwuanyi & Idoko, 2022).

Companies may employ self-service technologies to streamline their operations and to speed up customer service (Stašys, Švažė, & Klimas, 2022). For example, Chilis installed tabletop computer screens in its restaurants. This allowed customers to place their orders directly and to pay by credit cards. The restaurant chain realized that users of the service spend more per check, in part because they buy more desserts and coffee when the screen is present (Nilsson, Pers, & Grubbström, 2021). Similarly, the SBI YONO application started by State Bank of India allows customers to conduct all banking transactions online on a smartphone (Halvadia, Halvadia, & Purohit, 2022).

Companies which employ self-service technologies try to improve their services provided through such technologies (Jan & Abdullah, 2014). For example, Comcast has automated its customer service where 40 percent of the installations are done by the customers themselves and 31 percent of customers manage their accounts completely online (Chong, Yu, Keeling, & de Ruyter, 2021).

Companies which intend to employ self-service technologies should aim to successfully integrate technology into the workforce (Moon & Lee, 2022). This, in turn, requires a comprehensive reengineering of the front office to identify the core strengths of employees, what machines do best, and how to deploy them separately and together (Arachchi, Sandaruwani, & Dinusha, 2022). Companies realize that the biggest hurdle in applying self-service technologies is not the technology itself but convincing customers to use it, especially for the first time (Arachchi et al., 2022).

Customers should clearly understand their roles and responsibilities in the self-service process. They should be assured about the benefits received from such technologies, and must be confident that they can use the technology themselves without much external support (Moon & Lee, 2022). However, it should also be remembered that self-service technologies are not for everyone. Although, sometimes customers may be fascinated by automated voices, many can provoke frustration and even rage at being unable to speak with an actual human being (Chiu & Nguyen, 2022).

### **6.2. Emergence of Contact Centres with Chatbots**

Long-term customer relationships are built and developed because of the customer support provided by companies in the service industry (Kumar & Mokha, 2022). Call centres have evolved into contact centres with the extensive application of artificial intelligence (AI), machine learning (ML), and

natural language processing (NLP). Companies providing services make use of such technologies in the technology-driven digital era (Roberto, Fabiana, Giuditta, & Sergio, 2022). Chatbots are employed extensively by companies now-a-days to provide customer services. Chatbots allow companies providing services to support customer care executives in handling a large volume of customer queries. Chatbots employ automated AI-based application tools to handle tasks as well as human interactions using ML and NLP (Lappeman, Marlie, Johnson, & Poggenpoel, 2022). Customer support executives find it easier to handle routine tasks and queries with the help of chatbots. Usage of chatbots allows companies to automate the processes and to improve the operational efficiency. Effectiveness of contact systems with chatbots, employees, and customers is improved. This allows organizations to employ a smaller number of customer care executives (Eyada & Ahmed, 2022). Chatbots help organizations to resolve frequently asked queries and initiate troubleshooting guides. Consequently, customer care executives get more bandwidth and time to handle complex issues (Eyada & Ahmed, 2022).

AI technology is getting upgraded continuously. Such upgrades have transformed the human engagements with chatbots by enhancing the quality of interactions between business and customers (De Andrade & Tumelero, 2022). Chatbots allow companies to handle the *Mobile-first* population with its messaging applications for instant real-time response to customer queries (Tasic & Cano, 2022).

Productivity of organizations is improved and businesses become cost-effective for organizations with the introduction of chatbots (Lappeman et al., 2022). Many chatbots are used in the initial stages of a service interaction to understand the requirements, queries, or complaints of customers. Companies can handle and resolve customer issues better with the help of such preliminary understanding. The overall experience of interactions of customers with contact centres is improved because of chatbots (Klein & Martinez, 2022).

Chatbots facilitate rapid scaling up of support to meet spikes in demand by automating responses to customer queries and issues (De Andrade & Tumelero, 2022). It is feasible for businesses to adopt chatbots because of improvements in the underlying technologies, declining costs, and improving effectiveness in handling routine queries. Chatbots are emerging as an efficient and low-cost technology option to offer personalized and real-time solutions to millions of customers in an effective manner (Adel, Elhakeem, & Marzouk, 2022).

Integration of chatbots with other advanced AI tools and technologies enhance the capabilities of chatbots to handle more complex service tasks easily (Le Dinh, Pham Thi, Pham-Nguyen, & Nam, 2022). Contact centres will depend on the AI-based conversational chatbots with the roll out of 5G networks, offering faster solutions to improve customer service and interactions (Chan, Hogaboam, & Cao, 2022).

## **7. INITIATIVES BY COMPANIES**

Service companies involved in generation and delivery of superior services and in the management of service quality, adopt initiatives and strategies to excel and to delight their customers. One company that has built its business around exceeding customer expectations with respect to services is American Express (Batat, 2022). State Bank of India offers SBI YONO which lets customers conduct most of the banking transactions online on a smartphone (Barthakur, 2021).

### **7.1. Initiatives by American Express**

American Express aims to build and develop long-term relationships with its profitable customers (Kiviat, 2021). Customer service representatives at American Express are judged in part based on customer feedback. Representatives are called as customer care professionals. They can view all kinds of relevant data on their screen when a customer makes any call (Madhani, 2021). The details may include names, ages, addresses, and buying and payment habits. A card member may lose a wallet or purse while traveling or may need assistance finding a missing child in a foreign country. In such cases, customer care professionals at American Express are empowered to do whatever it takes to solve the issue (Madhani, 2021). This exemplary customer service brings financial benefits too.

Card members are impressed because of such efforts and rate their customer experiences positively. They tend to increase their spendings on American Express cards by 10 percent to 15 percent and are four to five times more likely to remain loyal customers (Larson, Jaworski, & Larson, 2021). This increases the shareholder value of American Express. It also indicates the strong service culture and support at American Express. Because of such initiatives, American Express can ensure some of the highest employee retention rates in the industry (Sachs, 2018).

## 7.2. Initiatives by SBI YONO

State Bank of India (SBI) introduced SBI YONO (You Only Need One) as an integrated digital banking, investments, and shopping platform (Kini & Basri, 2022). Within a few years of its launch, SBI YONO attracted over 37 million subscribers with over 2.3 million online transactions every month (Halvadia et al., 2022). YONO allows customers to fulfil their banking and shopping needs from the comforts of their homes. The application is convenient and offers integrated self-service solutions (Kini & Basri, 2022). Customers can access more than 100 e-commerce websites, book tickets, pay bills, make investments, and transfer funds *on the go* using mobile apps (Lipp, Marshall, & Dencik, 2021). YONO continues to grow rapidly with 9 million logins per day. It attracted 2 million new customer accounts and sourced loans of over Rs. 5000 crores during FY2021 (Lipp et al., 2021). State Bank of India extended YONO to seven foreign markets and onboarded 40000 customers. YONO offers new services which include YONO Agri for farmers and YONO Business for corporates and small and medium enterprises. YONO allows such businesses to meet their respective banking and other needs like letter of credit, cash management, supply chain finance, and foreign exchange, among others (Kini & Basri, 2022).

## 8. DISCUSSIONS

Companies offering services try to generate and deliver superior services. They try to manage service quality and adopt strategies and initiatives for management of service quality. Top service providers are aware of the advantages of service differentiation and its value in creating memorable customer experiences. Service quality is a key driver of customer satisfaction. The determinants of service quality include reliability, responsiveness, assurance, empathy, and tangibles. Companies should strive to deliver superior service on all these dimensions so that they are able to create value for their customers. At the same time, they should focus on those services that customers value the most. Companies should focus on managing customer expectations and product-service bundles. Companies should realize the importance and involvement of technological developments and information technology in management of service quality. They should manage self-service technologies properly and should understand and appreciate the emergence of contact centres with chatbots. All these aspects are discussed in the study. The study has both theoretical and managerial implications.

### 8.1. Theoretical Implications

Academics will understand the importance of management of service quality in the generation and delivery of superior services. They may analyze the importance of managing customer expectations and product-service bundles. They may analyze the involvement and importance of technological developments and information technology in management of service quality. Based on all these analyses, academics may suggest models for service quality. Such models may allow companies to manage service quality effectively.

### 8.2. Managerial Implications

Companies and practicing managers will realize the importance of generating and delivering superior services and the management of service quality to beat the competition and to achieve company growth. They will appreciate the importance and involvement of technological developments and

information technology in the management of service quality. They will realize the necessity of implementing the latest technological developments and involving information technology like self-service technologies and chatbots in the management of service quality. They may investigate which practices are in place in their organizations and which other best practices should be implemented to manage service quality in their organizations more effectively.

## **9. CONCLUSIONS**

Companies should understand the roles of managing service quality in the generation and delivery of superior services. They should understand customer expectations and should manage product-service bundles effectively. They should involve technological developments and information technology like self-service technologies and chatbots in the management of service quality.

### **9.1. Limitations**

The study conducted a conceptual analysis of the various aspects of management of service quality in organizations. Primary data is not collected and empirical analysis is not done. Also, the study focused on conducting an analysis of the markets in the United States with examples from India.

### **9.2. Avenues of Future Research**

Researchers may study the roles of management of service quality in the generation and delivery of superior services. Conceptual analysis may provide insights about management of service quality in organizations. However, empirical analysis may provide deeper and practical insights which may be implemented to formulate strategies and initiatives which are effective. Researchers may conduct empirical analysis in markets outside that of the United States and investigate about the best practices which should be implemented for effective management of service quality. All these will help companies to deliver superior services, to achieve growth, and to achieve business excellence in the long run.

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