

Application of TQM in Resolving e-Commerce Challenges

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Abstract

e-COMMERCE is facing a number of challenges today. Although, the future of retailing in India lies in e-Commerce, its current penetration is not encouraging. The giants and the pioneers in e-Commerce are struggling today with a number of issues. These issues and many other challenges can be resolved with the help of the doctrine of TQM. The study addresses to various quality issues of the web sites which are neglected to fulfil the requirements of the customers, and propose Total Quality Management (TQM) implementation as the best solution to sort out the issues.

KEYWORDS & PHRASES

TQM, e-Commerce, penetration, Security, Internet Users & Consumers.

Introduction

According to a survey by industry body ASSOCHAM, the e-Commerce market in India has grown to an astonishing figure of \$ 16 billion in 2013, clearly indicating a boom in the online retail trends and defying slower economic growth and spiralling inflation. "The increasing Internet penetration and availability of more payment options boosted the e-commerce industry in 2013," ASSOCHAM Secretary General D S Rawat said.

"Besides electronics gadgets, apparel and jewellery, home and kitchen appliances, lifestyle accessories like watches, books, beauty products and perfumes, baby products witnessed significant upward movement in

last one year," Rawat said. According to the survey, India's e-commerce market, which stood at \$2.5 billion in 2009, reached \$8.5 billion in 2012 and rose by 88 per cent to touch an astonishing figure of \$16 billion in 2013. The survey has estimated that the country's e-commerce market to probably reach \$56 billion by 2023, driven by rising attraction towards online retail.

To make the most of increasing online shopping trends, more companies are collaborating with daily deal and discount sites, the survey pointed out. "Having close to 10 per cent of Internet penetration in India throws a very big opportunity for online retailers to grow and expand as future of Internet seems very bright," Rawat said.

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Online business sells to individuals. It is the indirect trade between the company and consumers. The basic concept of this model is to sell the product online to the consumers. Amazon.com has been able to sell books and many other items directly from its warehouse to people. The internet is changing how logistics and supply chains work since the "middle man" or distributor is eliminated by selling products directly from the factory to the end consumers, i.e., B2C – Business-to-Consumer.

e-Commerce has several benefits, but it is having several quality issues as well. We propose Total Quality Management (TQM) as the solution. TQM is a set of guiding principles for continuous improvement. It is a customer driven philosophy wherein the stress is ultimately on customer delight. TQM has a tremendous potential to generate the improvements in the process of e-Commerce. TQM focuses on meeting the needs of the customer. TQM is not inspection, but actually the prevention of defects, involving everyone in the organization.

Total Quality Management (TQM) comprises customer focus and continuous improvement. Hence, quality begins with understandings of customer's requirements upon which the performance goal for the organization is based. Variation in quality is controlled by using statistical methods. Continuous improvement begins with statistically defined current process and identifies the future modifications to the process that might reduce the defects and increases the predictability of the performance. In this research paper the concept of TQM and e-Commerce is explained. It discusses the issues of the quality in E-commerce. Finally, it analyses the applicability of TQM in the e-commerce (B2C). According to the survey by ASSOCHAM, as per responses by 3,500 traders and organised retailers in Delhi, Mumbai, Chennai, Bangalore, Ahmedabad and Kolkata who participated in the survey, online shopping grew at a rapid pace in 2013 due to aggressive online discounts, rising fuel prices and availability of abundant online options.

Among the cities, Mumbai topped the list of online shoppers followed by Delhi, while Kolkata ranked third, the survey found.

The age-wise analysis revealed that 35 per cent of online shoppers are aged between 18 years and 25 years, 55 per cent between 26 years and 35 years, 8 per cent in the age group of 36-45 years, while only 2 per cent are in the age group of 45-60 years. Besides, 65 per cent of online shoppers are male while 35 per cent are female.

The products that are sold most are in the tech and fashion category, including mobile phones, ipads, accessories, MP3 players, digital cameras and jewellery, among others, it found. India has Internet base of around 150 million as of August, 2013, the survey said.

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Those who are reluctant to shop online cited reasons like preference to research products and services online (30 per cent), finding delivery costs too high (20), fear of sharing personal financial information online (25) and lack of trust on whether products would be delivered in good condition (15), while 10 per cent do not have a credit or debit card.

This paper attempts to analyze the benefits of implementing total quality management principles in e-business. Majority of leading companies are implementing customer focused quality management principles. Cost reduction, improve quality, efficiency and customer satisfaction are the core benefit of total quality management (TQM). TQM have helped many companies to improve their competitiveness (Yang, 2003). E-commerce helps to find new customers and it enhances the improvement of services for the existing customers.

An Organization survives because of its customers. A service sector has to have regular orders to keep its wheels moving. Hence, ISO 9000:2000 incorporated customer focus as an improvement. A customer is satisfied if his implied needs are satisfied and he becomes a goodwill ambassador for the Organisation. Basically, a customer is satisfied by the use of a product and the service associated with it. With reference to

the service, time utility, place utility and the price play a pivotal role in customer satisfaction, wherein he looks for 'value for money'.

Some of the building blocks of TQM are (i) act always in line with the needs of the customers (ii) do right the first time by focussing on zero defect' banner (iii) involve all participants in the enterprise (iv) measure 'value-added'. The objective is to attain performance level of the highest order so that the Organisation attains market leadership.

The success of TQM involves commitment of employees as well as commitment from the top because the objective of a service organisation maximizing its performance regarding customer satisfaction. This can be achieved only by understanding the customers' stated and implied needs and developing a user-friendly customer-oriented products and services.

The Total Quality Management system believes in rewarding performance. The reward need not be always monetary. A healthy, sincere appreciation can go a long way in boosting morale. A non-performer has to be tactfully dealt with in improving performance. Comparing himself unfavourably with fellow colleagues actually has a demoralising effect that will ultimately affect the overall performance of the Organisation.

Some of the points of Edward Deming to reach world class standards in performance can be applied to e-commerce. They are: (i) achieve a constancy of purpose (ii) learning of new philosophies in management in terms of growth (iii) reduce the number of vendors in terms of delivery of goods. Have only those who are committed and reliable (iv) Improve supervision but, at the same time, drive out fear from the minds of the employees (v) Improve communication with internal and external customers (vi) Use relevant statistical tools to eliminate defects in the system (vii) act on feedback given by the customers

Value Analysis

From the customers' viewpoint, value can be seen into two parts: one the 'musts', which are the basic requirements, regarding the service and two: the 'wants', which are the desirable features about the

service. Hence, the service provide should fit for the use of the customer and the user-friendliness decides about the market leadership.

From the Organisation perspective, the products or services marketed have certain internal factors to be taken into consideration. This pertains to optimum utilisation of internal resources. Most important is the type of labour which may cost the organisation in terms of quality and competency. Applying productivity techniques such as kaizen, muda, mura, poka yoke, jidoka will help in improving performance of the workforce.

The various methods of implementing value analysis could be as follows: (i) simplify operations (ii) standardize procedures (iii) reduce lead times (iv) eliminate unnecessary wastage in time (v) seek fruitful and practical solutions from employees (vi) use 'ergonomics' to improve performance at delivery points

One thing which is important in any organisation is 'change' or 'improvement' as otherwise, an organisation will be obsolete, outdated and would not survive for long in this fierce competitive world. Hence, 'continuous improvement' should be the way of life for any world class organisation. ISO 9000-2000 has made it compulsory for organisations going for certification to have evidence that they are practicing the Deming's P-D-C-A cycle, as this practice inculcates the practice of continuous improvement.

Challenges in e-Commerce

Logistics and fulfilment are the largest challenges in India when it comes to the arena of e-commerce, with more than half of all online retail sales being done using cash on delivery (COD). While COD is essential in a nascent e-Commerce market, it can have a large negative impact on business margins. This is exacerbated in a nascent market where consumers are testing this new medium of ordering goods, as the return rates can be quite high. In India, reportedly, the return rates can vary from 5% to more than 25%, depending on the category, the demographics of the online buyers, and their online tenure.

The biggest challenge in e-commerce industry is

the extent of reverse logistics and the fact that it is increasing with every passing day, especially after the advent of COD mechanism, the instances of the same are on a rise. This is very evident in India more because of the customers' ignorant attitude to 'try out' the service.

Reverse logistics are often more time sensitive than getting the goods to the customer in the first place. This is because of the risk of obsolescence, or usability, of the returned goods. This is one of the many factors that motivate and compel e-commerce providers to outsource their reverse logistics setup. Returning goods back to the manufacturer creates problems for the manufacturer in terms of finding the exact reason for the return. Many times it could be the customers' fault in ordering the incorrect product.

A significant part of reverse logistics involves trashing the goods collected from customers. Waste has always been a contentious issue with ever changing legislation. As a result, a specialist reverse logistics provider is usually in a better position to dispose off a product in a manner that is compliant with regulation.

Interestingly, the mark-ups that reverse logistics providers use often tend to be higher than the original mark-up by the ecommerce merchant. This is not really the anomaly as it seems, since the e-commerce merchants could get saddled with returned goods. Once these goods start piling up, the e-commerce merchant would not be able to continue his usual business owing to the finance blocked in these goods.

Two key lessons have to be looked into with regard to traditional logistics: responsibility and information accuracy. Brick-and-mortar companies understand that someone has to own the order fulfilment process and proper monitors need to be in place. In an environment where logistics operations are being managed internally, there is a logistics manager who tracks, among many things, where each order is in the supply chain at any given time. This manager has ownership of the business architecture, design and acquisition of the systems and processes for tracking orders.

Instead, if an organization outsources fulfilment to a

third party logistics provider, someone must still be responsible for managing the relationship with the provider. This manager identifies the points of contact where information will flow back and forth between the two organizations. The customer also sets the performance metrics on which the relationship will be evaluated.

While order fulfilment is ultimately about getting product from its source and delivering it to the customer, maintaining and providing accurate order management information is really the key to keeping the promise to the customer. Accurate information management requires agreement between all e-fulfilment. The competitive advantage involves accuracy (e.g. 95% vs. 100%), ownership, timeliness and distribution of the information, immediacy of updates, maintenance of confidentiality and security, and a variety of other factors that must be carefully designed and planned.

Order fulfilment responsibility and information accuracy are traditional priorities that have many times got lost in the world of e-commerce. Tomorrow's winners realize this and are taking action to fix the problem. This is essentially a by-product of the improper processes by the outsourced logistical partner. There are instances of goods being delivered to the consumer in a damaged state. This abstains the consumer to go for online purchase especially in case of fragile goods.

With an increase in the e-fencing of stolen merchandise, attention has recently turned to the role of Internet marketplaces such as eBay and Overstock in combating. These marketplaces take various measures to combat the sale of stolen and fraudulently obtained goods—not solely by organized retail criminals—on their websites, including educating sellers and consumers, monitoring suspicious activity, and partnering with retailers and law enforcement.

For instance, these marketplaces may provide guidelines for website use that would require users to acknowledge policies regarding goods that may or may not be sold through the website. In addition, online markets may create filters to search for prohibited items up for auction. They may then take actions such as removing the prohibited items, sanctioning the policy

violator, or referring the case to law enforcement. E-Bay has created such filters based on input from regulatory agencies, law enforcement agencies, the retail industry and member reports.

Fulfilment is probably the most important aspect of an e-commerce business because it is probably the last a thing customer remembers about his interaction. For example, If a waiter in a restaurant has been exemplary for an entire meal, but inadvertently takes five minutes too long to bring the cheque, the customer is probably going to have a poor opinion about the restaurant. Likewise, if everything about the e-commerce site is in-place, but the customer has experienced a bad fulfilment experience, he is not going to blame the fulfilment company.

Vendors may make mistakes by sending the wrong items, or by sending too many or too few. Or, items may get damaged during delivery to the fulfilment centre. How will the fulfilment company handle this? In fact, will they even know if an item is damaged? Or, will they know if a change was made to the packaging? All such acts will not be known till the customer complaints. If control is lost over such an essential part of e-business, the organisation is destined towards major problems.

For e-commerce to meet its potential in the next several years, it is going to require greater amounts of bandwidth both in backbone networks and in local access connections to users. The best starting point is to identify the infrastructure product most employed by business users to build networking capabilities. The most common building blocks used to construct or permanently connect to e-commerce networks (e.g. Internet, Intranets etc.) are private lines which are leased from telecommunication carriers (i.e. leased lines).

TQM Resolutions to e-Commerce Challenges

TQM offers effective measures in improving e-commerce in terms of satisfying the customers' needs. Some of the measures that can be applied are as follows

1. Order receiving and processing

A customer generally assumes many aspects of his order. When he places an order, he is generally under

the impression that he has given all the necessary details along with the order. The service provider must use the S.M.A.R.T. principles in analysing the order: Specific, Measureable, Accurate, Realistic, Time-bound. In case of any clarification, the customer should be contacted to confirm the order. The principle should be 'do-right-the-first-times'. This will avoid customer dissatisfaction and return of goods.

2. Committed employees

The service provider should train and motivate employees in serving the customers to fulfil their wants. An employee should be appreciated and rewarded for his good work. The management should have empathy towards the employees and be proactive towards their genuine needs. The management should shun bureaucratic attitude and, where required, interact directly with the employees. Working-along-with-people is more important today rather than working-above-people. The top management is doomed if it allows its ego to mix with its position while dealing with employees.

3. The 5S principle

5S is a part of lean management as it eliminates wastes. It stands for the five Japanese words: SEIRI (tidiness) , SEITON (Orderliness) , SEISO (Cleanliness) , SEIKETSU (Standardization) , SHITSUKE (Discipline). When applied, these principles actually reduce the cost. These should become an organization culture. In fact, one of the biggest advantage is that it helps in S.K.U – Stock-Keeping-Unit as it helps to spot-the-required-stock immediately.

4. Kepner-Tregoe Method of Problem Solving

K-T Problem Analysis is a systematic method to analyse a problem and understand the root cause of the issue instead of making assumptions and jumping to conclusions, which is still common place even today. This method has become very popular in IT and technical fields, but can be applied to a wide range of problems.

The same structure of Problem analysis is used in DMAIC and has been proved many times over in the field. Furthermore specific aspects of the Problem Analysis method can be used to greatly improve and

strengthen these other problem solving methods. It is a habit of the management to attack the 'symptoms'. Rather than understand the 'root cause' of the problem. This is more so in service industries.

5. Performance Measures

Adequate performance measures regarding reducing of defects in delivery, customers' complaints regarding packaging, delays in attending to customers' requirements, inefficiency in employees regarding conforming to set-standards of work, etc. Statistical control charts for variables and attributes can be designed to improve performance. This should be backed by training, brain-storming sessions, suggestion-cum-reward schemes, which will help in improving performance.

Conclusion

Today, the customer is a part of the business. The survival of an organisation depends upon the satisfaction level of the customers which is very important for service industries. In fierce competitive world, a customer has many options today. Hence, a committed customer is very important for a service organisation.

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