Study of Construction and Implementation Strategies of EB Platform Service Convenience System under Six Sigma Concept

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ABSTRACT

In this Study, 6 Sigma Concept was built in the research framework of Electronic Business (EB) Platform Service Convenience System under Business-to-Customer (B2C) mode, 6 Sigma Management Model with service process as foundation, customer as core and improving quality of Service Convenience System as original intention was constructed, DMAIC implementation strategies were deeply explored with customer orientation, pursuit of zero-defect excellent quality and cost control methods in 6 Sigma Management Concept were used, the author wishes to provide EB enterprises with feasible reference about making operation and management strategies from the perspective of internet customer convenience.

INTRODUCTION

According to research statistical data of China Internet Network Information Center (CNNIC), by June 2017, the number of Chinese Internet consumers reached 0.514 billion and increased 10.2% compared with the end of 2016, with the steady proportion rise of B2C trades and ever closer integration trend of Online-to-Online (O2O), consumer convenience perception industry has become a primary factor for Internet customers to select EB Platform. In the era of Internet+, with the ever-accelerating pace of social life, time sensitivity of new consumer class is increasingly prominent and consumption involvement clearly declines, effectively reducing time cost and effort cost spent by Internet customers during their virtual consumption experience process on EB Platform will substantially increase service convenience perceived by Internet customers and cause positive influences on improving quality of Internet customer relationship, customer attitude loyalty and behavior loyalty.

FRAMEWORK OF EB PLATFORM SERVICE CONVENIENCE SYSTEM

On perspective of enterprises, pre-limiting factors which affect EB Platform service convenience perception shall include quality of system design, performance of real-time handling purchase order and EB enterprise image.
Quality of system design can significantly affect Internet customer consumption convenience perception; the quality items which have positive influences on subjective impression of EB Platform consumption convenience and final consumption behavior intention mainly are: if EB Platform system framework is clear enough for potential consumers to register and log in EB Platform; if layout and design of webpages are reasonable and nice; if classifying selection and navigation functions of system search engine are powerful; if payment and settlement processes are safe and fast; and other details. SUN Junhua used stop watch of time study to test the relation between efficiency of Internet customer online shopping and quality of EB Platform system design, according to his experiment data, there is significant correlation, moreover, the higher quality of system design is, the more helpful it will be for increasing Internet customer consumption convenience perception. On level of testing quality of EB Platform system design, YOO et al. and BARNES et al. respectively established SITEQUAL Evaluation System and WEBQUAL Measurement Scale. Accessing convenience and trade settlement convenience are key measuring dimensions. Therefore, high attention shall be paid on such two sections for EB Platform system design. Accessing convenience refers to time cost and effort cost spent by Internet customers on registering and logging in EB Platform, browsing and searching for information about goods and services provided on such EB Platform. For registering, logging in, browsing webpages and searching for information on EB Platform, registration steps shall be simplified, several safe login ways shall be provided, voice recognition technology and image search function shall be further strengthened for accurate positioning of target goods, fuzzy search, search correction and relevant functions of search engine shall be constantly improved, in this way, fast system response can increase service convenience perception of new consumer class. Payment and settlement convenience refers to time cost and effort cost perceived by Internet customers during trade settlement on EB Platform. Providing fast payment methods on EB Platform according to different consumer preferences, further avoiding financial risks and reducing non-monetary cost expenditures during virtual consumption experience process can also effectively improve quality of Internet customer relationship, customer attitude loyalty and behavior loyalty.

Performance of real-time handling purchase order is closely related to Internet customer consumption convenience experience, the performance items which have positive influences on EB Platform consumption convenience perception mainly are: If ordering process of EB Platform is clear and convenient enough to assist Internet customers in making consumption decisions; if purchase order handling level can reflect automation, intelligence and accuracy; if responding time of ordering system is delayed; if socialized logistics distribution system is complete, if logistics distribution plans can fully interpret management flexibility and other details. Therefore, close attention shall be paid on potential effects caused by ordering convenience and logistics distribution convenience on Internet customer consumption experience during real-time handling purchase order section of EB Platform. Ordering convenience refers to Internet customer’s comprehensive evaluation on clarity of purchasing process and performance of helping function of EB Platform. High attention shall be paid on all details in section of EB Platform purchasing process design, such like: positions and color conspicuousness of add to cart, confirm to settle and other function buttons; increase or decrease number of ordered goods, simplicity of canceling or ordering again, and etc. in addition, considering small scale, high frequency, high randomness and other characteristics of Internet trades are increasingly prominent, FSM Model and ALICE Working Mechanism shall be applied as foundations for EB Platform, principles of knowledge base systems and inference rules and strategies shall be integrated, design structure, work and knowledge processing process, human-computer
interaction inference work procedures of real-time purchase order handling software robot shall be reviewed and modified in order to further improve operating efficiency and reduce operating cost of EB Platform. Logistics distribution convenience refers to time cost and effort cost which Internet customers must spend for obtaining core values of services. Because time sensitivity of new consumer class is increasingly prominent and consumption involvement clearly declines, self-operated logistics distribution support system shall be established for EB Platform, area scope of limit-time delivery shall be expanded, neural network matching technology and collaborative selecting technology shall be integrated with different needs of Internet customers.

EB enterprise image is a comprehensive embodiment of vision, operation and management concepts and brand culture of EB enterprise, it consists of three layers – Internet customer’s impression and attitude and public opinion about EB enterprise. In the fact that “Lemon Phenomenon” commonly and objectively exits in Internet virtual consumption experience, time sensitivity of new consumer class is increasingly prominent and consumption involvement clearly declines, Internet customers usually prefer EB enterprises with good brand images to avoid service risks and simplify process of making network consumption decisions. Moreover, heterogeneity, intangibility and perishability of services, asymmetric situational information of virtual consumptions and diversity of needs of new consumer class cause unavoidable service failures to some extent. According to QIU Li’s research results, remedial measure convenience under service failure situation has significant influences on effectively mending quality of Internet customer relationship and improving customer attitude loyalty and behavior loyalty, namely highly-efficient and convenient service remedial measures are necessary and sufficient conditions for EB enterprises to customize different compensation packages on basis of equity theory. Remedial measure convenience refers to time cost and effort cost which Internet customers must spend for obtaining EB Platform service compensations under service failure situations. Consumers are usually unsatisfied, querulous and negative about service failures, such kind of negative reputations can be spread quickly through WeChat, virtual community and other ways in the era of social network and cause far-reaching impacts on brand images of EB enterprises. EB enterprises shall timely respond to customer complaints, conduct positive communications, make remedial measures on perspective of consumers about perceiving service convenience and pass sincerity of remedy in order to repair quality of Internet customer relationships and rebuild enterprise images.

On perspective of consumers, pre-limiting factors which affect EB Platform service convenience perception shall include time value sensitivity and awareness of thinking about transpositions.

Time value sensitivity refers to attention on time cost and effort cost paid by Internet customers during virtual consumption experience process. Fascination of Internet consumption mainly embodies in high efficiency and convenience of consumers’ making consumption decisions. However, diversity of consumption channels will lead to closer attention on time cost of virtual consumption from Internet customers, especially from new consumer class with high sensitivity on economic value of time; effectively activating and respectively satisfy various potential needs in virtual consumption experiences on EB Platform are measures with significant practical values for improving EB Platform service convenience perception. SZYMANSKI’S research results also proved that there is significant correlation between particular time value sensitivity of individual consumers and EB Platform service convenience perception, his research also emphasized that convenient services are helpful for EB enterprises to establish and maintain B2C structural relationship with consumers.
Awareness of thinking about transpositions is a thinking mode of handling interpersonal relationship with understanding first, its basis point is integrity and its medium is effective communication. During virtual consumptions, Internet customers are usually influenced by their personal standards and internal values and used to evaluate EB Platform service convenience on basis of their own thinking modes, feelings and experiences. However, if Internet customers can review business process on perspective of service suppliers, think about transpositions, fully consider efforts put into EB Platform to provide services for them, reduce their criticizes and complaints, consumption convenience perception will be improved synchronously.

Figure 1. Framework of EB Platform Service Convenience System.

6 SIGMA MANAGEMENT MODEL OF EB PLATFORM SERVICE CONVENIENCE SYSTEM QUALITY

6 Sigma, on level of narrow sense, is considering 1.5 Sigma deviations on basis of statistics normal distribution and making falling probability of such deviations beyond 6 Sigma be only 3.4PPM, on level of broad sense, is quality standards of measuring and evaluating a product or service. In this research, 6 Sigma concepts were built into EB Platform Service Convenience System and 6 Sigma Management Model with service process as foundation, customer as core and improving quality of Convenience System as original intention was constructed, as shown in Figure 2.
IMPLEMENTATION STEPS OF IMPROVING CONSUMER SERVICE CONVENIENCE PERCEPTION UNDER 6 SIGMA CONCEPTS

Defining Phase: Define core requirements of Internet customer service convenience perception. Paying attention on customer requirements is the core value of 6 Sigma, EB enterprises shall systematically describe relevant factors which affect Internet customer satisfaction during service process, verify critical customer requirements (CCR), make improvement targets according to current status of service convenience, combine real-time customer feedback data and dynamically and slightly adjust to-be-improved projects and targets. Defining CCR shall include following three steps: (1) Form business process with customer as core, namely systematically select and summarize factors which affect EB Platform service convenience respectively on perspectives of enterprise and customer, review business process on basis of customer convenience orientation in order to make business process deeply integrate with all sections of enterprise operation and management on levels of strategy and tactic; (2) Listen to voice of customer (VOC). EB enterprises can learn about Internet customer consumption convenience perception from after-sale evaluation, questionnaire, virtual community and many other ways. (3) Convert VOC into CCR. In this section, same or similar customer feedbacks shall be selected and classified first, and then corresponding customer focuses shall be deeply analyzed.

Measuring Phase: Evaluate current quality level of EB Platform service convenience and obtain evaluation conclusions. In this Phase, EB enterprises shall firstly refer to CCR verified in Defining Phase and establish index system for evaluating core service sections, and then issue questionnaire, evaluate quality level of EB Platform service convenience perceived by customers through statistical analysis, check defects per million opportunities (DPMO) in Form and verify Sigma level, compare such Sigma level with service quality level expected by customers, analyze and find gap. For instance, when improving level of service failure remedial measure convenience -- a critical section in EB Platform service convenience quality level -- from 4 Sigma to 5 Sigma, DPMO will significantly decline by 96.3%. Accordingly, time cost and effort cost perceived by Internet customers will decrease rapidly and service convenience experience will be improved 27 times.
Analyzing Phase: Define critical factors which affect improving quality level of Service Convenience System. EB enterprises shall systematically analyze the data collected in Measuring Phase, describe critical factors which affect quality of EB Platform Service Convenience System in details, find causes of problems with brainstorm ideas; main purpose of this Phase is to describe various affecting factors \((X_1,X_2,X_3,\ldots,X_n)\) in critical factors \(\phi\) which affect Service Convenience System with as many details as possible, build concept model \(\phi=f(X_1,X_2,X_3,\ldots,X_n)\) for causes of problems, verify values of process variables \((X)\) with significant property among many process variables which affect project \(\phi\).

Improving Phase: Determine optimal improvement plans on basis of critical factors. In this Phase, EB enterprises shall deeply explore critical factors which affect quality of EB Platform Service Convenience System and are defined in Analyzing Phase, summarize same or similar opinions, eliminate infeasible suggestions, determine optimal solutions, make targeted improvement plans and implement reforms. In addition, EB enterprises can also refer to Convenience Hierarchical Diagram, systematically analyze their existing services, positioning layout of such services and implement convenience marketing strategies according to different product and customer properties on different nodes of Convenience Hierarchical Diagram.

Controlling Phase: Continuously improve service convenience perceived by consumers during virtual consumptions. This Phase is a critical step in improving Internet customer service convenience perception under B2C mode. In this Phase, EB enterprises shall standardize improved service convenience processes, integrate solutions into daily service management process and monitor continuously in order to assure winning customer satisfaction and trust on improvement achievements, and to improve quality of Internet customer relationship, customer attitude loyalty and behavior loyalty.

CONCLUSION

In this Essay, real environment service mode was based, properties of services in virtual consumptions and various factors which affect EB Platform service convenience were comprehensively considered, research framework of EB Platform Service Convenience System under B2C mode was creatively built, it was believed that Internet customers evaluate EB Platform service convenience in basis point of individual differences and on basis of their comprehensive perceptions on quality of system design, performance of real-time handling purchase order and EB enterprise image; 6 Sigma management concepts were innovatively built into EB Platform Service Convenience System, it was suggested to use DMAIC implementation steps, pay attention on core requirements of Internet customers, optimize service process, systematically analyze critical factors which affect quality of service convenience and actively conduct continuous improvement. Moreover, the author advises that EB enterprises shall be aware that the construction and implementation of EB Platform Service Convenience System under 6 Sigma is a long-term systematic engineering, EB enterprises shall keep exploring and make progress step-by-step during marketing management practice.

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