Service Delivery Strategy for Internal IT Service

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Abstract. Internal IT service has a promising potential for business value creation. However, in order to realize this value, firms need to provide an adequate level of service quality (SQ) through customer satisfaction. Through literature review from the IT and Marketing fields, a strategy to ensure customer satisfaction in an internal IT service is presented. "Reliability" is determined as the most important aspect of SQ and in an internal IT service the minimum expectation of this aspect is linked to the SLA. To ensure customer satisfaction, firms need to consistently deliver a dependable and accurate service within the SLA. Also, in the case of the improvement of SQ, service providers need to focus on eliminating dissatisfier instead of focusing on satisfier because dissastisfier and satisfier are not two sides of the same coin.

Keywords: IS service quality, internal IT service, SERVQUAL

1. Introduction

As IT becomes more capable, the complexity of IT systems to support these business processes increases and naturally there is a higher need for support in executing business processes which utilize complex IT system such as Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP) systems. This support is provided by firms through IT services. However, in order to ensure that value is created from these services, IT needs to stay true to its commitment and provide an expected level of quality [16][30]. Because SQ is defined as customer's judgment of overall service performance [21], customer satisfaction is an indicator of SQ.

By combining literature from the marketing and IT field, this paper presents the service delivery strategy that firms can adopt to ensure customer satisfaction that will in turn create business value.

2. Service Quality Determinant in Internal IT Service

In 1988, Parasuraman et al. [21] defined five determinants of SQ:

- Tangibles; the appearance of physical facilities, equipment, and personnel
- Reliability; the ability to perform the promised service dependably and accurately
- Responsiveness; the willingness to help customers and provide prompt service
- Assurance; the knowledge , courtesy and ability to inspire trust and confidence
- Empathy; proving caring and individualized attention to customers.

Although SERVQUAL was first used in the marketing field, there has been ample support for the use of SERVQUAL dimensions in measuring SQ in the IS setting. Review of studies on the dimensions of SERVQUAL that contributed to customer satisfaction in an internal IT service and IS setting [1][8][11][12][15][23] will be presented here.

Most studies support the exclusion of the dimension "Tangibles" in defining IS service [8][11][12][23]. They argued that a customer's physical view might be limited to their own workstation, Even when the "Tangibles" dimension is supported, it is given low importance by customers [1] [15].

One study [11] categorized the dimensions into two: "*people skill*" and "*IT service attribute*", where *IT service attribute* is comprised of "Reliability" and *people skill* is comprised of "Responsiveness", "Assurance", and "Empathy". Their conclusion supported another study's argument that those three dimensions are not characteristically different [23].

With the exception of [1] and [15], "Reliability" is observed to be the major contributor to customer satisfaction. The difference of the finding from [1] might be due to the following:

- Culture played a part in customers' evaluation of the importance of SQ; [1] is the only one conducted in the Eastern part of the world. (See also [14])

- Their study was not conducted in a work setting; the finding from [15] suggested that except for "Reliability" and "Responsiveness", other dimensions are not considered important because of stress in the workplace.

However, to critique [15], the description for the dimension "Reliability" and "Responsiveness" is not characteristically different. "Performing promised service dependably" and "Providing prompt service" could be interpreted by customers as the same thing.

We can summarize that generally in an internal IT service setting "Reliability" is the most important. This implies that **"**Reliability" is a necessary condition for achieving IT service customer's satisfaction and that the rest of the criteria can be used to exceed their satisfactions [12]. Now that the determinants of internal IT SQ have been defined, the expectation of a customer regarding the SQ is as equally important to be discussed.

3. Expected Service Quality in Relation to Customer Satisfaction

Zeithaml et al. [32] defined service expectation into desired service and adequate service. Desired service is the level of service that customers want to receive, while adequate service is the minimum level of performance acceptable to customers.

Customers, evaluating their expectation and the actual performance of the service, will decide on the overall outcome, which can be one of the following: *dissatisfaction*, *satisfaction*, and *delight* [3]. This evaluation of outcome follows disconfirmation paradigm [18]. The disconfirmation paradigm stated that *dissatisfaction* results from negative disconfirmation, which is when customers' expectation is higher than actual performance; *delight* results from positive disconfirmation, which is when customers' expectation is lower than actual performance; *satisfaction* is achieved when adequate expectation is confirmed by actual service performance.

Additionally, Poeisz and Bloemer [24] suggested that it is more appropriate to consider customer expectation as zones. Hence, each of the three outcomes is connected to three different ranges of expectations [10]. Zeithaml et al. [32] defined the zone for *satisfaction* as Zone of Tolerance (ZOT), which is the range of expectation between adequate and desired expectation. A narrow ZOT means that customers are more difficult to please because of the small difference from adequate to desired service. A wider ZOT on the other hand mean that it is easier to provide customers with an adequate service, since their expectation is not so high. However, it is then more difficult to exceed their minimum expectation and provide them with their desired service.

It is possible to estimate the expectation of internal IT service customers through characteristics:

- Internal IT customer has no choice regarding alternative service provider [22]

  "For customers in service settings characterized by customer indifference among competitive options, high switching costs and perceptions of the service as a "necessary evil", their conception of adequate or minimum service expectations are likely to be linked to the predicted service levels they are familiar with" [29]

Following this statement an internal customer's minimum service expectation would be linked to the Service Level Agreement (SLA) in the internal IT service. "Reliability" can then be linked with the promise of meeting the SLA while still providing an accurate execution of service within the agreed time as specified in the SLA.

- Internal IT customers are more knowledgeable regarding the services they would receive. Hence there is a general expectation of availability and high levels of SQ [17].

  "Customers who are more favorably disposed towards the service have a smaller zone of tolerance" [7]

  "The implication is that with a small zone of tolerance, IT service provider need to perform with consistent level of service because customers only tolerate a small range of service quality" [13]

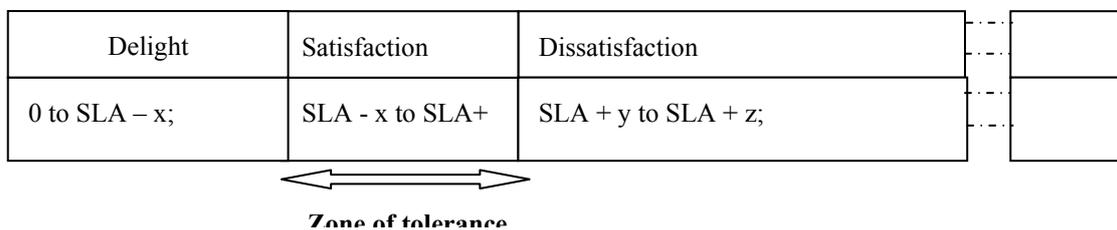| Delight	Satisfaction	Dissatisfaction		
0 to SLA – x;	SLA - x to SLA+	SLA + y to SLA + z;		

Zone of tolerance

Fig. 1: Relationship between SLA, ZOT, and service performance outcome.

So far we can estimate that an internal customer's adequate expectation would be linked to the SLA and that the ZOT would be narrow such as the customer would only tolerate a small deviation from the SLA, where SLA is the amount of agreed time for service delivery (Fig.1).

In the next chapter we will discuss desired outcome that an internal IT service should aim for followed by the needed performance to ensure the desired outcome.

4. Service Performance Target Outcome

"A performance below the tolerance zone will engender customer frustration and decrease customer loyalty. A performance level above the tolerance zone will pleasantly surprise customers and strengthen their loyalty" [2]

There have been other supports linking delight with customer loyalty and delight being a source of differentiator for competitive advantage [26][27]

For an internal IT service provider, customer loyalty is defaulted since there is no other alternative. Their main concern should be whether they can ensure satisfaction, which contributes indirectly to business value [5] [6]. Furthermore Zeithaml et al. [31] stated the following:*"From a managerial standpoint, customer satisfaction only matters to the extent that it affects behavioral outcome"*

Gatian [6] found evidence that satisfaction improves positive behavior i.e. improved efficiency and better decision making performance. If there is a linear relationship between satisfaction and positive behavior, it might be worthwhile to maximize satisfaction i.e. by pursuing delight. However, recent researches show that this might not be the case [4] [28]. Oliver [19] also gave support that depending on the service sector, *delight* might not be worthwhile to be pursued.

Reviewing the literature, it is wise for an internal IT service to just focus on satisfying customer. Now that we have defined the service performance outcome to achieve, we will discuss the strategy that could be taken by internal IT service provider to match actual service performance and the expected SQ to ensure *satisfaction*.

5. Service Delivery Strategy for Target Outcome – Satisfaction

According to Johnston [10], service providers need to be consistent in the level of service they provide. This is so because in evaluating service performance outcome, customers take into account historical service encounters [3]. *Dissatisfaction* in the past encounter might lead to customers lowering their expectation. On the other hand, *satisfaction* leads to customers increasing their expectation raising the possibility that future service expectation might not be met, leading to customers being dissatisfied. For this reason it is important to provide a consistent performance that meets customer expectation. In the case of an internal IT service, it is important to deliver consistent service within the SLA to ensure that customers are satisfied.

In order to provide adequate service that leads to *satisfaction*, the focus should be on *dissatisfier* and not on *satisfier*'; *"satisfier and dissatisfier are not two sides of the same coin"* [9].

Satisfier and *Dissatisfier* are two categories SQ attributes. **When *dissatisfier* is eliminated, it will provide customer with adequate service.** *Satisfier*, in the other hand when provided will provide customer with desired service; e.g. "Hygiene" is the SQ determinant and the attribute is "dirty floor". This attribute can be categorized as a *dissatisfier* for the customers because once clean it is not likely to be a source of *delight*; it is possible *dissatisfier* and *satisfier are not the opposite of each other*. An SQ attribute can be both *satisfier* and *dissatisfier* and is expressed as *critical*.

According to Pollack [25], if the attribute that is going to be improved is a *dissatisfier* then improvement is necessary up to adequate level of SQ. If however, it is a *satisfier* then depending on the current level of service that the service provider is delivering, the improvement might or might not bring improvement in customer's level of satisfaction for SQ improvement outside of the ZOT shows a nonlinear relationship to customer satisfaction. However, Pollack identified that in the case of *critical*, SQ improvement always have a linear relationship with customer satisfaction. Unfortunately, added customer satisfaction for an internal IT service will not bring added benefit to the firm as there is no evidence of a linear relationship between customer satisfaction and business value. In this case, the strategy that should be adopted by an internal IT service provider is to focus on dissatisfier to improve SQ up to the level of adequate service. Service providers also need to deliver a consistent performance in providing "Reliability".

6. References

[1]   Badri, M. A., Mohammed, A., & Al-Madani, A. (2005). Information Technology Center Service Quality. *International Journal of Quality & Reliability Management Vol.22(8)* , 819-848.

[2]   Berry, L. L., & Parasuraman, A. (1991). *Marketing Services.* New York: Free Press.

[3]   Bitner, M. J., & Hubbert, A. R. (1994). Encounter Satisfaction versus Overall Satisfaction versus Service Quality. In R. a. Rust, *Service Quality: New.* Thousand Oaks, CA: Sage.

[4]   Cheung, C. M., & Lee, M. K. (2008). User Satisfaction with an Internet-Based Portal:. *Journal of the American Society for Information Science and Technology Vol.60(1)* , 111-122.

[5]   DeLone, W. H., & McLean, E. R. (2002). Information Systems Success Revisited. *35th Hawaii International Conference on System Sciences.* Waikoloa: Computer Society.

[6]   Gatian, A. (1994). Is User Satisfaction a Valid Measure of System Effectiveness? *Information Management Vol.26* , 119-131.

[7]   Gwynne, A. L., Devlin, J. F., & Ennew, C. T. (2000). The Zone of Tolerance: Insights and Influences. *Journal of Marketing Management Vol. 16* , 545-564.

[8]   Jiang, J. J., Klein, G., & Crompton, S. M. (2000). A Note on SERVQUAL Reliability and Validity in Information System Service Quality Measurement. *Decision Sciences Vol.31(3)* , 725-744.

[9]   Johnston, R. (1995a). The Determinants of Service Quality: Satisfiers and Dissatisfiers. *International Journal of Service Industry Management Vol. 6(5)* , 53-71.

[10]   Johnston, R. (1995b). The Zone of Tolerance: Exploring the Relationship between Service Transactions and Satisfaction with the Overall Service. *International Journal of Service Management Vol.6(2)* , 46-61.

[11] Kang, H., & Bradley, G. (2002). Measuring the Performance of IT Services: An Assessment of SERVQUAL. *International Journal of Accounting Information Systems Vol.3* , 151-164.

[12] Kettinger, W. J., & Lee, C. C. (1994). Perceived Service Quality and User Satisfaction with the Information Services Function. *Decision Sciences Vol.25(5/6)* , 737-766.

[13] Kettinger, W. J., & Lee, C. C. (2005). Zones of Tolerance: Alternative Scales for Measuring Information Systems Service Quality. *MIS Quarterly Vol.29(4)* , 607-620.

[14] Kettinger, W. J., Lee, C. C., & Lee, S. (1995). Global Measures of Information Service Quality: A Cross-National Study. *Decision Sciences Vol. 26(5)* , 569-588.

[15] Landrum, H., Prybutok, V., Zhang, X., & Peak, D. (2009). Measuring IS System Service Quality with SERVQUAL. *International Journal of an Emerging Transdiscipline Vol.12* , 18-35.

[16] Luftman, J., & Brier, T. (1999). Achieving and Sustaining Business-IT Alignment. *California Management Review Vol.42(1)* , 110-122.

[17] Marshall, G. W., Baker, J., & Finn, D. W. (1998). Exploring Internal Customer Service Quality. *Journal of Business & Industrial Marketing Vol.13(4/5)* , 381-392.

[18] Oliver, R. L. (1980). A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions. *Journal of Marketing Research Vol.17* , 460-469.

[19] Oliver, R. L., Rust, R. T., & Varki, S. (1997). Customer Delight: Foundations, Findings, and Managerial Insight. *Journal of Retailing Vol.73(3)* , 311-336.

[20] Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1994). Reassessment of Expectations as a Comparison in Measuring Service Quality: Implications for Further Research. *Journal of Marketing Vol.58(1)* , 111-124.

[21] Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A Multiple-item Scale for Measuring Consumer Perceptions of Service Quality. *Journal of Retailing, Vol.64(1)* , 12-40.

[22] Peppard, J. (2003). Managing IT as Portfolio of Services. *European Management Journal Vol.21(4)* , 467-483.

[23] Pitt, L. F., Watson, R. T., & Kavan, B. C. (1995). Service Quality: A Measure of Information Systems Effectiveness. *MIS Quarterly Vol.19(2)* , 173-187.

[24] Poiesz, T., & Bloemer, J. (1991). Customer (Dis)satisfaction with the Performance of Products and Services. *Proceedings from the European Marketing Academy Conference*, (pp. 446-462). Dublin.

[25] Pollack, B. L. (2008). The Nature of Service Quality and Satisfaction Relationship. *Managing Service Quality Vol. 18(6)* , 537-558.

[26] Rust, R. T., & Oliver, R. L. (2000). Should We Delight the Customer? *Journal of the Academy of Marketing Sciences Vol.28(1)* , 86-94.

[27] Schneider, B., & Bowen, D. E. (1999). Understanding Customer Delight and Outrage. *Sloan Management Review Vol.41(1)* , 35-45.

[28] Sethi, V., & King, R. C. (1998). An Application of the Cusp Catastrophe Model to User Information Satisfaction. *Information & Management Vol.34* , 41-53.

[29] Yap, K. B., & Sweeney, J. C. (2007). Zone-of-Tolerance Moderates The Service Quality-Outcome Relationship. *Journal of Services Marketing Vol.21(2)* , 137-148.

[30] Zarnekow, R. (2006). *Integrated Information Management.* Berlin - Heidelberg: Springer.

[31] Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The Behavioral Consequences of Service Quality. *Journal of Marketing Vol.60* , 31-46.

[32] Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1993). The Nature and Determinants of Customer Expectations of Service. *Journal of the Academy of Marketing Science Vol. 21(1)* , 1-12