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ABSTRACT

This document is a report on how California community colleges can incorporate customer satisfaction models and theories from business to better serve students. Emphasis is given to two levels of customer satisfaction: macro- and micro-models. Macro-models look at how customer satisfaction relates to other elements or priorities of community colleges. They utilize techniques like comparing standards of performance of various community college services and products, which can positively or negatively affect customer satisfaction. Micro-models look more directly at different elements of customer satisfaction. Seven micro-models are reviewed in the report: (1) expectations disconfirmation; (2) perceived performance; (3) norms; (4) multiple process; (5) attribution; (6) affective; and (7) equity. All seven models rely on feedback and communication from customers or students in the case of community colleges. The choice of model determines whether the college may be interested in establishing norms, affecting student emotions or behavior, or improving performance. The report suggests that community colleges view and measure customer satisfaction globally and specifically. The basic goal of using the models is to satisfy students and provide a high quality education. (Contains 15 references.) (MKF)

An Overview of Customer Satisfaction Models

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Abstract

The concept of customer satisfaction has attracted much attention in recent years. Organizations that try to analyze this concept should begin with an understanding of various customer satisfaction models. Such models clarify various theories about customer satisfaction, making research and analysis in this topic more focused and less wasteful of research resources.

In this paper, the emphasis is on two levels of models. Macro-models of customer satisfaction theorize the place of customer satisfaction among a set of related constructs in marketing research. Micro-models of customer satisfaction theorize the elements of customer satisfaction.

This paper gives an overview of various models of customer satisfaction from the perspective of the marketing research discipline. Coverage is thus limited to material published in the marketing research literature. However, this paper discusses the relevance of this material from marketing research for the design of research in the public sector, specifically the domain of the community college (public, two-year institutions).

Introduction

Both public and private sectors have given much attention to the concept of customer satisfaction in the past couple of decades. Naturally, administrators have requested their staff to do customer satisfaction studies for their own organizations.

An analyst or researcher must operationalize the concept of customer satisfaction in order to measure it. More importantly, in order for any measurements to have validity, the analyst needs to assume some model of the subject matter. The analyst must use very explicit conceptualizations of the subject matter (in other words, models) if she/he expects to do research and analysis that has relevance for organizational decisions.

In this paper, we try to provide the analyst an overview of models of customer satisfaction. These models come from a vast literature from the marketing research discipline. This pool of research includes models that integrate the concept of customer satisfaction in a network of related concepts, such as value, quality, complaining behavior, and loyalty. In this paper, we will label these kinds of models as "macro-models." Macro-models have special importance for the policy-level implications of an organization's research in customer satisfaction. Macro-models give the researcher the strategic context of the design and of the results for a study of customer satisfaction.

The marketing research literature extensively covers the elements that make up the concept of customer satisfaction, such as disconfirmation of expectations, equity, attribution, affect, and regret. Because these elements explain the composition of the customer satisfaction concept (or "construct"), we will label these kinds of models as "micro-models." Micro-models enable an analyst to properly operationalize measurements of customer satisfaction, thus helping her/him to achieve construct validity in the eventual satisfaction survey.

Finally, for didactic purposes, we hypothesize how one type of public-sector organization, the community college, can apply these models that were originally designed for private sector activities.

Macro-models

To begin this discussion about customer satisfaction it will help to define customer satisfaction. A widely accepted definition would be the following:

"Satisfaction is the consumer's fulfillment response. It is a judgment that a product or service feature, or the product of service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment..." (Oliver, 1997).

This is a remarkable definition. First, the focus is on a consumer rather than a "customer." Traditionally speaking, the consumer uses a product or service, whereas a customer pays for the product/service but may not be the consumer (that is, the direct user). Granted, this is a fine distinction that gets lost in daily rhetoric, but it makes a difference in a researcher's modeling of satisfaction. Satisfaction with a product/service is a construct that requires experience and use of a product or service (Oliver, 1997). Individuals who pay for a product/service but who do not use this product/service should not be expected to have the type of (dis)satisfaction that a product/service user (the consumer) will have. So we need to realize that the concept of customer satisfaction is about consumer satisfaction (that is, user satisfaction), rather than about buyer satisfaction (which may include non-users).

Second, satisfaction is a feeling. It is a short-term attitude that can readily change given a constellation of circumstances. It resides in the user's mind and is different from observable behaviors such as product choice, complaining, and repurchase.

Third, satisfaction commonly has thresholds at both a lower level (insufficiency or under-fulfillment) and an upper level (excess or over-fulfillment). This means that a consumer's satisfaction may drop if she/he "gets too much of a good thing." Many people focus upon the lower threshold and neglect the potential for an upper threshold.

With this definition in mind, we move to the traditional macro-model of customer satisfaction. This is the model shown in Figure 1. This model underlies much of the research in customer satisfaction over the past decade. Note the following:

1. Perceived performance often differs from objective or technical performance, especially when a product/service is complex, intangible, and when the consumer is unfamiliar with the product/service.

2. Comparison standards can come from numerous sources that can vary widely by individual, by situation, and by product/service type.

3. Perceived disconfirmation is the evaluation of perceived performance according to one or more comparison standards. Disconfirmation can have a positive effect (generally implying a satisfying result), a negative effect (generally implying a dissatisfying result), or a zero effect.

4. Satisfaction feeling is a state of mind, an attitude. The phrase "mixed feelings" applies here, as a consumer may have different levels of satisfaction for different parts of a product/service experience.

5. Outcomes of satisfaction feelings may involve intent to repurchase, word-of-mouth (the consumer's communication with her/his network of her/his approval/disapproval for a product/service), and complaints. These outcomes also are moderated by other variables. For example, extreme dissatisfaction will not necessarily generate complaint behavior, especially if the consumer believes complaining will be futile.

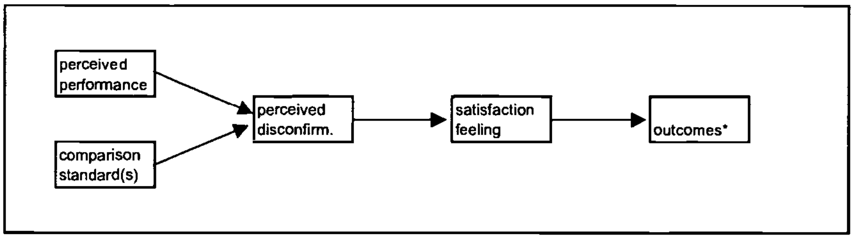

Figure 1:Traditional Macro-Model of Customer Satisfaction
(adapted from Woodruff & Gardial, 1996)

*includes intent to purchase, word-of-mouth, loyalty, and complaints.

Later research has produced a new model shown in Figure 2. This model highlights the concept of value as a driving force in product choice and satisfaction's relationship to it as a brief psychological reaction to a component of a value chain (or "hierarchy"). Oliver (1999) provides another version of this model, which appears in an abbreviated form as Figure 3 below. An important point about customer value models is the use of gross benefit-cost judgments by consumers.

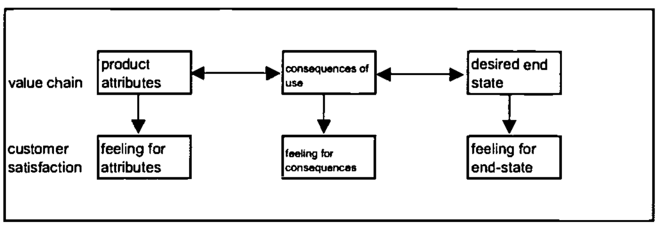

Figure 2: Model of Linkage of Customer Value Chain to Customer Satisfaction
(adapted from Woodruff & Gardial, 1996)

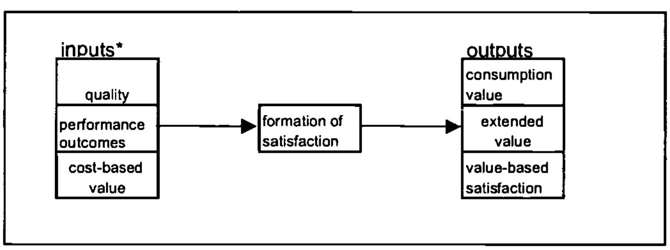

Figure 3: Model of Link Between Satisfaction and Value
(adapted from Oliver, 1999)

* In Oliver's model, excellence criteria lead to quality, and sacrifices lead to cost-based values.

Another important macro-model would be the linkage of overall service satisfaction, encounter satisfaction, and perceived service quality, as shown in Figure 4. Research for this model supports the conceptualization of perceived quality as a separate construct, distinct from satisfaction (Bitner & Hubbert, 1994). Furthermore, it highlights the construct of a "global" level of satisfaction (the overall service satisfaction) in contrast to the construct of a component level of satisfaction (the encounter service satisfaction).

This model helps explain survey results that indicate different levels of satisfaction for a service that one individual may experience.

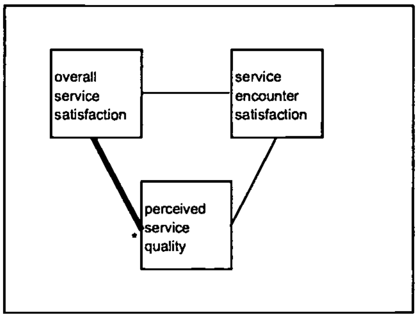

Figure 4: Model of Two Levels of Satisfaction and Perceived Service Quality
(based on a study by Bitner & Hubbert, 1994)
* denotes a stronger correlation between these two constructs

Some models differentiate between technical service quality and perceived service [quality]. Figure 5 shows one such model and how satisfaction results from a comparison between expected service and perceived service (Bateson, 1991). This model is explicit about the cyclical, feedback loop that affects satisfaction. A consumer's prior experience joins "other data inputs" to shape current satisfaction with a service.

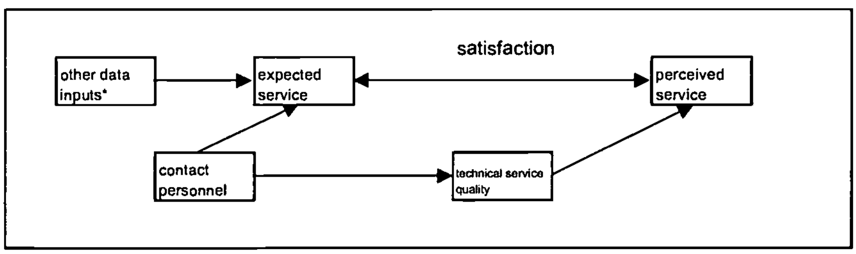

Figure 5: Model of Sources of Customer Satisfaction
(adapted from Bateson, 1991)

*includes word-of-mouth, past experiences, and advertising.

The above models are but a sample of the many models that give the analyst the context for the meaning and analysis of customer satisfaction. In the next section, we deal with narrower issues in customer satisfaction. Because these models provide explicit detail about the formation of satisfaction itself, this paper refers to them as micro-models.

Micro-models

Erevelles & Leavitt (1992) provide an excellent summary of our micro-models. Table 1 lists the seven types of models they review in their article, and we will briefly comment on each type.

1.	Expectations Disconfirmation Model
2.	Perceived Performance Model
3.	Norms Models
4.	Multiple Process Models
5.	Attribution Models
6.	Affective Models
7.	Equity Models

Table 1: Current Types of Micro-Models for Satisfaction
(adapted from Erevelles and Leavitt, 1992)

1. The Expectations Disconfirmation Model has been the dominant model in satisfaction research. The model has consumers using pre-consumption expectations in a comparison with post-consumption experiences of a product/service to form an attitude of satisfaction or dissatisfaction toward the product/service. In this model, expectations originate from beliefs about the level of performance that a product/service will provide. This is the predictive meaning of the expectations concept.

2. The Perceived Performance Model deviates from the model #1 above in that expectations play a less significant role in satisfaction formation. The model performs especially well in situations where a product/service performs so positively that the consumer's expectations get discounted in her/his post-consumption reaction to the product/service.

3. Norms Models resemble the Expectations Disconfirmation Model in that the consumer compares perceived performance with some standard for performance. In this case, however, the standard is not a predictive expectation. Rather than considering what will happen in the consumption experience, the consumer uses what should happen as the comparison standard. This is the normative meaning of "should" rather than its occasional chronological connotation in the English language.

4. Multiple Process Models characterize the satisfaction formation process as multidimensional. That is, consumers use more than one standard of comparison in forming a (dis)confirmation judgment about an experience with a product/service.

5. Attribution Models integrate the concept of perceived causality for a product/service performance into the satisfaction process. Consumers use three factors to determine attribution's effect in satisfaction. These are locus of causality, stability, and controllability. The locus of causality can be external (that is, the service provider gets the credit or blame) or internal (that is, the consumer is responsible for the product/service performance). Stable causes would tend to have more impact in satisfaction because consumers tend to be more forgiving of product/service failures that appear to be rare events. Finally, controllability affects attribution in that a poor outcome in a consumption experience may mean that the consumer will be unsatisfied with the product/service provider if the consumer believes the provider had the capacity, that is, control, to perform in a better fashion.

6. Affective Models differ from previous models in that it goes beyond rational processes. In these models, emotion, liking, and mood influence (dis)satisfaction feelings following the consumption experience.

7. Equity Models emphasize the consumer's attitude about fair treatment in the consumption process. Fair treatment can use the concept of the equity ratio (that is, the amount of her/his return for her/his effort made) or the concept of social comparison (that is, the perceived, relative level of product/service performance that other consumers experience). Oliver (1997) breaks equity down further into three categories, procedural fairness; interactional fairness; and distributional fairness.

The above listing is extensive but not all-inclusive. Oliver (1997) also has summarized the comparison standards from his perspective, and these appear in Table 2. Table 2 introduces the comparison standards of needs, regret, and nothing.

Comparison Operator	Resulting Cognition
expectations	disconfirmation
needs	need fulfillment
excellence (ideals)	quality
fairness	equity/inequity
events that might have happened	regret
nothing	uappraised cognition

Table 2: Basic Sources of Comparison
(adapted from Oliver, 1997)

In the needs standard, consumers evaluate whether a consumption experience gave them what they need. Of course, need can be defined in different ways, with Maslow's hierarchy of needs being just one typology for needs. The standard of excellence refers to technical perfection, that is, some objective, widely recognized criteria. The standard of regret refers basically to the "what might have been" scenario for a consumer. This commonly occurs when a consumer realizes that what she/he got in one encounter could well have been improved if she/he had chosen a different provider. Finally, the nothing standard denotes the situation where consumers form a (dis)satisfaction feeling without cognition.

Another relevant modeling issue at the micro-model level is the multidimensionality of the satisfaction construct. Research, such as that by Mackoy & Spreng (1995), has found that satisfaction can have two coexisting dimensions, satisfaction and dissatisfaction for the same individual and the same consumption experience. A two-dimensional model of satisfaction helps explain the seemingly paradoxical occurrence of both high and low satisfaction scores on a satisfaction survey. This model can affect survey measurement methodology. Traditionally, researchers have measured satisfaction with a Likert-type scale with endpoint anchors of "satisfaction" and "dissatisfaction" because it was thought that satisfaction and dissatisfaction were the ceiling and floor of the continuum of a one-dimensional satisfaction construct. A two-dimensional model puts the validity of this attitude scale into doubt.

Methodological problems may motivate researchers to use a particular model. For example, recent research indicates that the measurement of expectations may not be necessary to measure satisfaction. The researcher's use of performance measures without measurement of expectations (the Perceived Performance model) helps avoid the potential for ambiguity, and hence unreliability, in the survey measurement of consumer expectations. Because research has found that consumers use different standards to form expectations, a researcher cannot know that the attitude scores from the survey analysis have consistent meaning across individuals (Oliver, 1997).

In addition, the use of the disconfirmation paradigm has meant the calculation of "difference scores" (that is, the difference between a rating for expected performance and a rating for perceived performance). The use of difference scores, as a psychometric issue, has raised some debate about statistical validity in satisfaction research (Chiou & Spreng, 1996).

An Example: Student Satisfaction for a Community College

Here we briefly demonstrate the application of customer satisfaction models in the domain of a public sector activity, student satisfaction for a community college. This is a hypothetical exercise, given for didactic purposes. The use of student satisfaction as a policy tool has its advocates (for example, see Taylor, 1996) and its critics (for example, see Olshavsky & Spreng, 1995), and we will leave the debate over it to another author.

1. Student satisfaction with a community college should be measured at a global (overall) level as well as at an "attribute level" (conceivably, the service encounter level). Taylor (1996) specifies an initial set of attributes to consider for a four-year college. For the community college domain, we might de-emphasize on-campus living attributes and focus more upon attributes like commute/parking, childcare, transfer assistance, job services (career counseling, placement, and etcetera), and class scheduling.

2. The linkage of satisfaction to value will be difficult to make because community college education is heavily subsidized by tax dollars. In other words, the value concept is skewed by the limited nature of the exchange between students and the college. In this scenario, "opportunity costs" (possibly measured by the regret dimension) may be much more relevant.

3. The amount of choice among colleges to attend will affect the satisfaction of students because this can affect the regret dimension.

4. The complexity, intangibility, and service nature of community college benefits impede the use of many customary standards of comparison that consumers might otherwise employ in the usual retail situation. This may lead consumers to place more emphasis upon perceived justice (and its three components). In fact, where students perceive a failure by the college,

perceived justice (or fairness) will have a critical role in the (dis)satisfaction determination (Smith, Bolton & Wagner, 1999).

5. The nature of community college benefits also places more emphasis upon word-of-mouth sources of information. Thus, peer or cohort attitudes and satisfaction levels should influence student expectations and standards for comparison (that operate in the expectations disconfirmation paradigm).

6. Differing levels of student knowledge (formed by experience and expertise) in benefits of the community college will probably moderate the satisfaction judgments (for example, see Prenshaw, Straughan & Andeson). Thus, we might want to stratify the analysis according to length of attendance (i.e., first-year, second-year, third-year, and so forth) or by amount of prior experience in the higher education domain.

7. Student involvement in the college will strongly relate to satisfaction because it synthesizes the consumer dimensions of equity (the concept of the effort/return ratio), consumer knowledge, dissonance (discussed in Oliver, 1999), and affect.

The above notes give a very cursory portrait of how the discussed models can help shape an analyst's research into one domain, the community college. We note that analyzing satisfaction for the totality of a community college is far more difficult than analyzing a limited product/service entity, such as one community college course. Aside from the multidimensional (multi-attribute) nature of the community college, student satisfaction is difficult to measure when students have one or more years to develop an overall satisfaction judgment. In analyzing student satisfaction with individual courses, students will have overall satisfaction judgments within shorter time intervals and with more tangible standards of comparison (that is, other courses they have taken at the college).

Conclusion

This paper has covered a vast pool of marketing research in customer satisfaction. The coverage by necessity is partial. We grouped satisfaction models into either a macro level or a micro level to simplify our presentation. Logically speaking, the macro-models subsume the micro-models, and overlap in concepts should occur. Other analysts may well approach the conceptualization of these models in an entirely different manner.

An analyst who plans to do a customer satisfaction study could benefit from consulting the insightful works by Yi (1990) and Anderson & Fornell (1994), as well as the works previously cited. The mountain of information that the analyst can review may consume a huge chunk in time and effort, but the benefits of understanding customer satisfaction models may pay commensurate dividends in useful analyses in the future. At the very least, use of the above material will supply a basic footing in any effort to understand customer satisfaction.

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