Chapter 8
Dealing with the Uncertainty of Satisfaction Surveys in Organizations That Employ Interactive Multimedia: An Analysis of False Answers Statistical Models through a Digital Music Library Case Study

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ABSTRACT

The meaning of customer satisfaction has introduced many research analyses in many scientific fields during the recent years. Customer satisfaction represents a modern approach for evaluating quality in any kind of organizations. Customer satisfaction provides a useful and objective feedback about preferences and expectations. This can be particularly important for the design of services based on multimedia and interactive technologies, which are novel to most users. During the evaluation process, surveys analysis must be applied with main task to understand customer satisfaction. For that reason questionnaires have been proposed to reflect the previous analysis. Many times in that process, individuals that participate in the interviewing process misunderstand the pose questions leading to false answers and error results, without evaluating all recourses during the interview. The aim of this chapter is to analyze a statistical modeling of that false answers considering categorical data analysis through a digital music library case study. This chapter focuses on a proposed method which is based on the probabilities of the positive or negative TRUE and FALSE answers, with main task to reduce the variability of the errors during the survey.

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INTRODUCTION

Both public and private sectors have given much attention to the concept of customer satisfaction in the past couple of decades. In today’s competitive world high quality service is the key for improving any organization under competition. Customer satisfaction does have a positive effect on an organization’s value generation, outcome and impact. Depending on the type of organization, satisfied customers, users or visitors form the foundation of any successful operation because satisfaction leads to repeat purchases, usage, visitation, brand loyalty, and positive word of mouth. Many researchers point out the fact that satisfied customers share their experiences with other people with main purpose to effect small groups of them. On the contrary, dissatisfied customers are more likely to communicate with a large amount of people chairing their own experiences.

Measuring customer satisfaction can be done by simply asking a series of questions. In particular each questions measure the degree of satisfaction or dissatisfaction for the customer under consideration. Satisfaction is best measured on a continuous scale, but for obvious reasons we cannot use an unlimited scale. The scale should be such that it allows the customer enough flexibility to express his opinion and yet be limited. Evaluation is a very complex task; it is referred to psychological and cognitive needs and wants, affecting personal behaviors and activity (Pearce, 1982). Under this evaluation approach survey analysis is the key point to measure that degree of satisfaction or expectation. Many times misleading results could appear based on errors during the questionnaires procedure. Loch (1999) has introduced some of them, reflecting the errors that probably maybe introduced in the analysis. To overcome this problem of errors under uncertain conditions statistical models must be introduced and analysis would take place based on these models.

The goal of the proposed modeling is to reduce the false negative answers during the evaluation process of multimedia and interactive technologies. This can be important to the design of services employing multimedia and interactive technologies. Feedback from the customer/user provides an understanding on the relationship between multimedia technology and the usability of the related web-based applications. Moreover, satisfaction surveys provide researchers and practitioners important information for the quality of multimedia technology services. Moreover, the employment of interactive multimedia systems in non conventional context increases the inherited uncertainty and imposes additional difficulties. Often, developers are still experimenting and exploring the interaction of humans with augmenting reality technologies, and other innovative multimedia systems. Services based on content presentation and interaction is including a wide variety of organizations and domains that include art, publishing, library science, museums, etc. This chapter presents the uncertainty of satisfaction surveys in organizations that employ interactive multimedia through a digital music library case study. More specifically, this chapter examines one of the few studies which have dealt with the usability and user satisfaction of two digital music library projects of Indiana University named VARIATIONS and VARIATIONS2.

MODELS FOR CUSTOMER/USER/VISITOR SATISFACTION

Over the last few decades several studies on satisfaction have been published and an evaluation of customer satisfaction methods has been attempted using various theories. Some researchers have looked at comparison of standards used in service quality and satisfaction and provided different measures (Liljander, 2005). Many researchers began to investigate customer satisfaction models in order to measure