The Role of Voice Design Features in Effective Self-Service Technologies

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This study aims to advance the understanding of effective self-service technologies (SSTs) in an ever increasing technology-mediated environment. The study hypothesizes a positive relationship between the voice design features (i.e., ease of voice) and customers’ voice intention. This relationship is also mediated by customers’ interface evaluation of SSTs. The study also evaluates how customers’ likelihood of successful voice outcome moderates the relationship between customers’ interface evaluation and voice intention. Hypotheses are proposed to be tested by using a computer-based online shopping experiment and a questionnaire given to college students. Keywords: Self-service technology effectiveness. Voice behavior. Voice intention. Interface evaluation. Likelihood of successful voice outcome.

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Abstract

This study aims to advance the understanding of effective self-service technologies (SSTs) in an ever increasing technology-mediated environment. The study hypothesizes a positive relationship between the voice design features (i.e., ease of voice) and customers’ voice intention. This relationship is also mediated by customers’ interface evaluation of SSTs. The study also evaluates how customers’ likelihood of successful voice outcome moderates the relationship between customers’ interface evaluation and voice intention. Hypotheses are proposed to be tested by using a computer-based online shopping experiment and a questionnaire given to college students.

Justification and Purpose

Self-service technologies (SSTs)—defined by Meuter, Ostrom, Roundtree, and Bitner (2000, p. 50) as “technological interfaces that enable customers to produce a service independent of direct service employee involvement” — are increasing in prevalence and becoming an important component of marketing (Zhu, Nakata and Sivakumar 2007). SSTs provide various services including monetary transactions, e.g., retail purchases; customer services such as hotel check out; and self-help, e.g., distance learning. These services benefit retail organizations and customers alike. Retailers are drawn to SSTs by their promise of greater cost efficiency, enhanced service quality, and their appeal to new customers when compared to in-person services (Parasuraman and Grewal 2000). Customer benefits include increased convenience, increased perceived control, money and time savings, and product/service customization (Robertson and Shaw 2005).

Given these benefits, customers in technology-mediated shopping environments value considerably the features of the technological interfaces, viz., the core components of SSTs (e.g., Alba et al. 1997; Zeithaml, Parasuraman and Malhotra 2002). Past research on SSTs and e-services provide some evidence for the positive impact of design features. For instance, Zhu, Nakata, and Sivakumar (2007) show how combined interface characteristics (i.e., comparative information and interactivity) and their interactions with individual traits influence SST effectiveness. However, researchers still know little about SST voice design features from the perspective of customers.

The purpose of this study is to address the existing literature’s knowledge gap regarding the factors that may lead to greater SST effectiveness. More specifically, it investigates the relationships between SST voice design features, customers’ interface evaluation of SSTs, and SST customers’ voice intention. It also examines whether and how customers’ perceived likelihood of successful voice outcome influences the relationship between customers’ interface evaluation and voice intention.

References


Theoretical Framework and Hypotheses

As SSTs prevail and increase within marketing (Zhu, Nakata and Sivakumar 2007), researchers and practitioners recognize the need to understand the effectiveness of SSTs. This study focuses on one design element of the SST interface, viz., voice, which has received only limited systematic research regarding its relationship to SST effectiveness. Using SSTs, an organization can provide efficient and effective interface features to facilitate and encourage customer voice.

This study includes four constructs in its theoretical framework. These include SST voice design features (i.e., ease of voice), customers’ interface evaluation of SSTs, customers’ voice intention, and customers’ perceived likelihood of successful voice outcome. The literature defines ease of voice as customers’ perceptions of the effort or trouble required to lodge a complaint with the service organization (Robertson and Shaw 2005). This study defines customers’ voice intention as the customers’ aim or intention to direct complaints to the service organization through various means. Interface evaluation refers to the judgments or attitudes about an SST based on customers’ experience with it (Zhu, Nakata and Sivakumar 2007). This study defines likelihood of successful voice outcome as the customer’s perception of the level of positive outcome resulting from a service organization’s efforts to remedy a service problem. The definition of likelihood of successful voice outcome is a modification of the definition for likelihood of success of the voice, which refers to customers’ perceptions of the service organization’s willingness to remedy service problems without “hassle” (Hirschman 1970). Two major reasons underlie this modification. First, Hirschman’s definition does not account for various scenarios within a more complicated picture. For example, customers might perceive a service organization’s willingness to remedy service problems as very high, but success-of-voice likelihood could be low (due to factors such as a service organization’s incapacity to remedy service problems to the degree it desires). Second, the experience customers gain from directing complaints to a specific service organization in addition to customers’ previous experience with other organizations and/or technologies, may significantly influence their perceived likelihood of successful voice outcome. For instance, research has demonstrated that previous non-store experience may help predict customers’ intention to adopt interactive electronic formats (Eastlick 1996) and to also shop electronically (Shim and Drake 1990).

The study proposes the following four hypotheses:

$H1$: Customers’ perceived ease of voice of SST voice design features will relate positively to customers’ voice intention.

$H2$: Customers’ perceived ease of voice of SST voice design features will relate positively to customers’ interface evaluation.

$H3$: Customers’ positive SST interface evaluation will relate positively to customers’ voice intention.

$H4$: Customers’ perceived likelihood of successful voice outcome will moderate the relationship between customers’ interface evaluation of SST and their voice intention.

Methodology

This study will utilize a combined methodological approach consisting of focus-group interviews, a computer-based online shopping experiment, and self-administered questionnaires to evaluate voice design features in the SST environment. First, focus-group interviews, comprised of a sample of 15 college students, will identify: 1) a typical product that they have commonly purchased via a website, 2) typical SST voice design features that are considered to be easy, and 3) typical factors that may influence customers’ perception of likelihood of successful voice outcome. Fifteen college students will complete the focus-group interviews in approximately 40 to 60 minutes on average. Next, this study will develop and test a computer-based experiment that simulates the self-service process that occurs with online shopping. The experiment will allow participants to respond to and evaluate the SST based on their actual interaction with the technology rather than through a hypothetical scenario. Interacting directly with the technology will enable participants to develop a sense of the level of ease of voice and the likelihood of successful voice outcome in the study’s SST environment, and to thereby assess the technology in a more realistic and practical fashion. Prior to using the website for the final online shopping experiment, the website will be pre-tested using 15 college students from the same university to ensure that the website is both feasible and realistic. Fifteen students will complete the website pre-test in approximately 25 to 40 minutes on average.

Finally, participants will be asked to complete the questionnaire and to provide individual demographic information to be used in the data analysis phase of the study.

References


Eastlick, Mary Ann (1996), Consumer Intention to Adopt Interactive Teleshopping, Marketing Science Institute.


