Journal of Retailing and Consumer Services 34 (2017) 229–234

Contents lists available at ScienceDirect

Journal of Retailing and Consumer Services

journal homepage: www.elsevier.com/locate/jretconser

Discernible impact of augmented reality on retail customer's experience, satisfaction and willingness to buy

Atieh Poushneh, Arturo Z. Vasquez-Parraga*

College of Business and Entrepreneurship, University of Texas Rio Grande Valley, 1201 W. University Drive, Edinburg, TX 78539, USA

ARTICLE INFO

Keywords:
Augmented reality
Retail user experience
User satisfaction
User's Willingness to buy

ABSTRACT

User technology has an agreeable impact on consumer decisions; yet the way such impact takes place may be little known. This study attempts to examine the impact of augmented reality (AR) on retail user experience (UX) and its subsequent influence on user satisfaction and user's willingness to buy. Five hypotheses are tested using a lab experiment. The results show that AR significantly shapes UX, by impinging on various characteristics of product quality, and that UX subsequently influences user satisfaction and user's willingness to buy. UX is captured as a third-order formative construct derived from four user experience characteristics: pragmatic quality, aesthetic quality, hedonic quality by stimulation and hedonic quality by identification. Except for the latter, these characteristics are second-order constructs. Important implications for researchers and managers follow.

1. Introduction

Customers intending to buy a toy walk into a store. An unassembled 3D puzzle catches their eye, but they are not quite sure what the final assembly will look like. Then, they are told about *augmented reality*, a collection of viewing features that helps customers visualize the assembled toy in three dimensions (3D), which enables them to observe the puzzle from every angle. This example illustrates how AR helps customers/users make purchase decisions. The literature on AR has emphasized the technological aspects of AR, but it has neglected the end user's needs and problems (Swan and Gabbard, 2005). Yet, AR is increasingly employed in designing and delivering products, even though research has not been able to catch up with the trend from a marketing perspective (Kozick and Gettliffe, 2010; Swan and Gabbard, 2005), especially the growing impact of AR on user experience (UX). This study attempts to understand the way AR influences UX and, at the outset, user satisfaction (US) and user willingness to buy (UWB). Although prior literature has studied some UX dimensions, no mutual agreement about measuring UX has been reached (Vermeeren et al., 2010). Earlier UX studies focused on such cognitive dimensions of UX as usability (e.g., Butler, 1996), but they have ignored UX's affective dimensions. To correct such narrow focus, a user-centered design (UCD) that involved users in the design process emerged (Karat, 1996) and embraced the cognitive and affective dimensions of UX (Alben, 1996). Thus, this study attempts to measure a unified measure of UX and answer the following research questions.

RQ1: How does augmented reality improve retail user experience? Why is it important that augmented reality enhance the user experience?
RQ2: Which and how do key factors moderate the relationship between augmented reality and expected retail user experience, if any?
RQ3: What are the effects of retail user experiences on two main consumer outcomes, user satisfaction and user's willingness to buy?

The remainder of this paper is organized as follows: first, a brief literature review of the main concepts used and relationships in the study will be discussed. Next, hypotheses, methodology, and results will be explained. Finally, conclusions, managerial implications, limitations, and proposals for future research will be discussed.

2. Conceptual framework

2.1. Augmented Reality (AR)

AR is a series of technologies that integrate real world and virtual information, thereby enhancing a specific reality (Lamantia, 2009). Some customers do not make online purchase because such deficiencies make the process risky (Kim and Forsythe, 2008a). AR can produce meaningful experiences for online shoppers (MacIntyre et al., 2001) by providing sufficient product information (Lu and Smith, 2007) that enables them to evaluate the targeted products

---

* Corresponding author.
E-mail addresses: Atieh.poushneh01@utrgv.edu (A. Poushneh), arturo.vasquez@utrgv.edu (A.Z. Vasquez-Parraga).

http://dx.doi.org/10.1016/j.jretconser.2016.10.005
Received 18 September 2016; Accepted 6 October 2016
0969-6989/ © 2016 Elsevier Ltd. All rights reserved.

(Kim and Forsythe, 2008a) and make decisions with more certainty (Oh et al., 2008).

2.1.1. AR is reflected in the level of interactivity

AR is a stimulus in this study, and the level of interactivity was chosen to reflect AR. Interactivity refers to the "extent to which users can participate in modifying the form and content of a mediated environment in real time" (Steuer, 1992, p. 84). Interactivity entertains users and enables them to personalize information in a 3D virtual model (Fiore, Kim and Lee, 2005), and they enjoy interacting with virtual objects more than they do handling or looking at physical objects (Li et al., 2001). In this study, three levels of interactivity are examined: high, middle, and low. It is assumed that a high level of interactivity will generate a greater UX and subsequently higher user satisfaction and user willingness to buy. Conversely, a low level of interactivity will generate weaker UX and subsequently weaker user satisfaction and user willingness to buy. In this study, high and the middle level of interactivity were examined as AR treatments, and low level of interactivity was examined as non-AR treatment.

2.1.2. Retail user experience (UX)

UX is holistic and subjective (McCarthy and Wright, 2004), and varies across time (Law et al., 2009). It is also defined as: "All the aspects of how people use an interactive product: the way it feels in their hands, how well they understand how it works, how they feel about it while they are using it, how well it serves their purposes, and how well it fits into the entire context in which they are using it" (Alben, 1996, p. 5).

UX is a complex construct that encompasses a user's inner state, product characteristics, and the context of use (Hassenzahl and Tractinsky, 2006). Product attributes include pragmatic quality (PQ), aesthetic quality (AQ), and hedonic quality (HQ). To measure UX, this study focuses on these product attributes (See Fig. 1)

3. Relationships and hypotheses

3.1. AR effect on UX as reflected in product pragmatic quality (PQ)

PQ is also called usability when it relates to the effectiveness, efficiency, and satisfaction of the UX (Butler, 1996). Since the usability aspect of UX covers a narrow scope of UX, it is not examined as a criterion to evaluate UX (Norman, 2004). The many features of a product, including usability, functions, size, weight, symbols, aesthetic, and usefulness may influence UX. PQ involves a portion of those interactions that emphasize the utility and usability of a product in relation to its potential tasks (Hassenzahl et al., 2003). AR enhances UX by revealing more product information than products without AR, which results in higher UX at the time of purchase, reduces users' anxiety (Huang and Hsu-Liu, 2014), and facilitates decision-making (Kim and Forsythe, 2008a, 2008b).

3.2. AR effect on UX as reflected in product hedonic quality (HQ)

PQ is essential to UX, but it does not exhaust UX. UX also involves emotional reactions (Hassenzahl and Tractinsky, 2006; Norman, 2004). Consequently, AR may influence UX as well by affecting HQ and thus facilitating several emotional benefits. AR facilitates user involvement and thereby enhances the hedonic value of experience (Kim and Forsythe, 2008b), which provides users the ability to share personalized experiences on social networks, thus enhancing playfulness (Huang and Hsu-Liu, 2014). Yet, the effect of AR on HQ can vary depending on whether the experience reflects enjoyment or social reference. Hassenzahl et al. (2003) distinguish three types of effects in HQ: effects by stimulation (HQ-S), effects by identification (HQ-I), and effects by evocation (HQ-E). HQ-S is related to the fulfillment of human needs for novelty and challenge. HQ-I refers to the fulfillment of human needs as self-expressions. HQ-E refers to the human fulfillment needs for symbolic meanings of an object.

3.3. AR effect on UX as reflected in product aesthetic quality (AQ)

The AQ of UX involves pleasurable experiences. Jordan (2002)

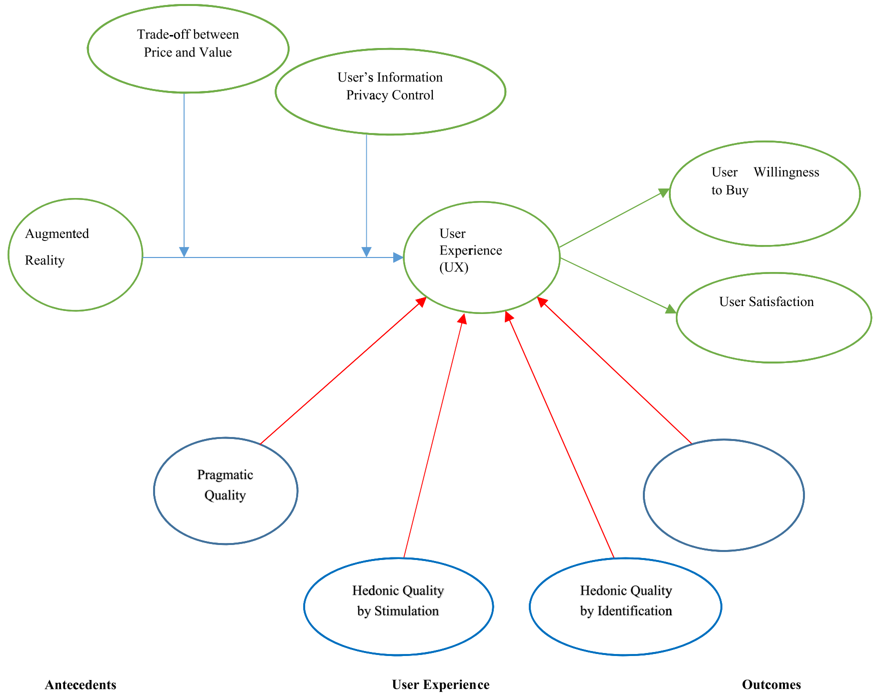
Trade-off between Price and Value
User's Information Privacy Control
Augmented Reality
User Experience (UX)
User Willingness to Buy
User Satisfaction
Pragmatic Quality
Hedonic Quality by Stimulation
Hedonic Quality by Identification
Antecedents
User Experience
Outcomes

Fig. 1. Conceptual framework: The impact of augmented reality on user experience and its outcomes.

Download English Version:

https://daneshyari.com/en/article/5111243

Download Persian Version:

https://daneshyari.com/article/5111243

Daneshyari.com