

# Research on the Influence of Web Experience on Consumers' Purchasing Intention

Yuanyuan Pan<sup>1</sup>, Miao Wang<sup>1</sup>, Cong Chen<sup>1</sup> & Hongjian Qu<sup>1</sup>

<sup>1</sup> School of Fashion, Shanghai University of Engineering Science, Shanghai, China

Correspondence: Hongjian Qu, School of Fashion, Shanghai University of Engineering Science, 333 Longteng Road, Songjiang District, Shanghai, China.

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## Abstract

The conversion rate is the core of e-commerce sites, and web experience is one of the most important factors of web conversion. A good web experience can bring consumers with trust and confidence, so that improve the income and profitability of the e-commerce business. This paper reviews the theory of web experience, the consumers' purchasing intention and other related theories. In this study, we systematically analyze the definition, measurement, evaluation system and application status of web experience, and discusses the relationship between web experience and consumers' purchasing intention. Research shows that the web experience is the weight of web design to the decision-making factors, the existing research on the web experience's definition, composition there are different, resulting in web experience measurement and evaluation different; web experience measurement methods and quantitative evaluation methods have yet to be improved. According to previous research, we summarize the shortcomings of current web evaluation and provide a direction for future research on web experience and consumers' purchasing intention.

**Keywords:** E-commerce sites, Web experience, Web evaluation and measurement, Purchase intention

## 1. Introduction

With the rapid development of e-commerce field, the convenience of online shopping makes the transaction process easier and more efficient. However, the reliability of the user experience is not high, according to the China Electronic Commerce Research Center, the report of "2016 China e-commerce user experience and complaints monitoring report" indicated that the number of online consumer complaints increased by 14.78% compared to 2015. With the explosive growth of the internet, the group purchase, cross-border online shopping, O2O, consumption by installments and other 'fashionable' consumption bring consumers with much convenience and benefit, but at the same time, they also come along with some troubles. Fraud activities, return difficulty, fraudulent delivery information, bad after-sales service and other problems trouble consumers a lot, which directly affect the conversion rate of e-commerce business. The conversion rate is the core of e-commerce business, and conversion rate is divided into three indicators: to translate the internet flow into e-commerce web flow, translate e-commerce web flow into the first purchase and translate the first purchase into the second purchase. There are many factors that affect the conversion rate of e-commerce enterprises, including brands, product attraction, customer service, website experience, customer behavior and other factors, and web experience is within the control of the enterprise. The web experience is the root of helping the web win consumers, which have a direct impact on the conversion rate of orders, and finally affect business income.

The time of experience economy is approaching, and future marketing campaigns will focus on the establishment of a better experience (Pine & Gilmore, 1998). Therefore, it is necessary to study whether the user experience of the e-commerce web has a significant impact on the purchase intention of the consumer, and what kind of evaluation system and will promote the consumer to buy the product.

Nowadays, the demand of consumer is no longer limited to the functional satisfaction of the web, but focus on psychological needs, so the study on web experience draws much attention from scholars and business company. Web experience is the reflection of user's subjective feelings, which involving with psychology, social science, computer science, consumer behavior theory, etc. Because web experience is influenced by user's subjective feeling, there is no authoritative definition and measure standards of it. As the expand of it's content and architecture, the

meaning of the web experience is constantly expanding (Scapin D L. et al, 2012). These years, the study of web usability, ease of use, interactive design, web art design and emotional design are related to some aspects of the web experience, but the true meaning of the web experience, the specific content and measurement methods have not yet reached a consensus.

This paper intends to review the research on the definition, evaluation system, application status and consumers' purchase intention of the web experience in recent years, and discusses the relationship between the web experience and the purchase intention of the consumer. This study summarizes the inadequacy of the evaluation of the site, and provides a theoretical direction for the future research. Through studying the consumer's impression and feelings of the web, we can make it clear that which factors will translate web visitors to product purchaser, and then influence the profit of the e-commerce business directly. Another important point is that in e-commerce and online marketing the audience is fragmented, but the firm has the possibility to combine various types of information in one intricate message (Gurau, 2008; Riasi & Pourmiri, 2015). Therefore, while providing unique opportunities in terms of customer-provider experience, the e-commerce can be challenging for the firms as well (Ansari & Riasi, 2016).

## **2. Web Experience Theory**

### *2.1 The Definition of Web Experience*

At present, many scholars regard the web experience as an academic research topic, the web experience and online experience, online shopping experience are the same meaning (Efthymios et al, 2010).

For the definition of the web experience, the previous study defined the web experience from two perspectives: the user experience and web quality. In terms of user experience, scholars generally believe that the web experience involves three aspects: user, product and interactive environment, and the most influential definition is: All responses and results from products, services, or services that are used or expected to be used (ISO 9241-2109, 2010). The definition shows that the web experience is generated by the interaction process of the user and the site, and the experience is mainly the user's perception and response, which include emotional and physiological response. The user experience is the context (inclination, expectation, expectation, motivation, mood, etc.) of the user and the system (complexity, purpose, usability, functionality, etc.) that has certain characteristics, resulting in a particular interactive environment (KayvanA, 2011). Compared to the two definitions, the latter gives the definition of almost all aspects of the site experience, but also has a certain operational. The web experience is the result of the user's inside activities (tendencies, expectations, needs, motives, moods, etc), and it has special characters (complexity, purpose, availability, functionality, etc), resulting from a particular interactive environment (KayvanA, 2011). Compared the two definitions, the latter gives almost all aspects of the web experience, and also has a certain operability.

For the definition of website experience, there are also from the aspect of web quality, which emphasis on the quality of the research system. Web experience is a system which aims at customer-oriented information (Park & Kim, 2003). The information transmitted to the user which is complete, then the user makes perceived judgment through the information and it called web experience (Joeng & Gregoire, 2003). E-commerce site is built for consumers to consume on it, and consumers are looking for the service quality, but the quality of the site is not just the service quality (Long & Mc Mellon, 2004).

From the above research, the researchers on the concept of the site experience mainly emphasis on two aspects: one view focus on e-commerce site perception. After use the web, the users make a evaluation of the web service, but do not consider the difference between virtual environment and traditional transactions. Another point of view is from the perspective of web quality, which pay attention to the quality of information systems but ignore the consumers' experience. The study of consumers' psychological environment is not enough, and not concerned about the communication that have an impact on the purchase intention. None of the definition can accurately describe the web experience, therefore, to make a more reasonable and comprehensive definition of the web experience is still an urgent problem to be solved.

With the continuous improvement of the e-commerce industry, scholars have gradually changed the understanding of the web experience. They believe that the web experience is neither simply a customer perception, nor a technical support, and it can not be separated from two of them in study. Web experience is influenced by many factors, it needs to combine a variety of useful points and analysis it comprehensively, so as to promote the e-commerce industry in a more stable environment, and both customers and businessman can have real income.

## 2.2 The Dimension of Web Experience

There are several representative theories about the dimension of web experience: scenario experience theory, user engagement theory and flow experience. Scenario experience theory means the experience in the virtual environment; user engagement theory refers that web experience including aesthetics, usability, emotion, attention, challenge, feedback, motivation, perceived control and sensory appeal; flow experience web experience including usability, user skills, challenges, attention, pleasure, awakening and sense of immediacy.

Scholars do not follow the above theoretical evaluation to study the dimensions of the web experience, but make different evaluation system according to different research environment. When studying the online store experience, the elements of the web experience should include searching, browsing, discovering, picking, comparing, evaluating, interacting with online stores, trading and other aspects and consumers' purchase intention is affected by the website design, events, emotions, atmosphere when using the websites(Efthymios et al, 2010).

For the emotion design, the site design should meet the three levels of emotional experience: instinctive, behavioral and reflective layer (Norman D A, 2007). Perceptual engineering is to achieve the user's emotional needs into the site emotional design, and find the design elements of user's emotion needs, then establish the relation model between two and provide a reference for the study of user's emotional experience.

For the user's needs design, the web experience provides uses with a certain of value, such as enjoyment, identity, commemorative, self-promotion and so on. There are 10 kinds of psychological needs, which mainly to emphasize the psychological satisfaction of users from the use of web(Hassenzahl, 2010). Compared with the most satisfied user experience and the most unsatisfied user experience inspect of emotional, psychological needs and interactive environment, the autonomy, competitiveness and self-esteem of the user's psychological needs are most important elements of the most satisfied user experience(Partala Kallinen, 2012). O'Brien studied the influencing factors of the e-commerce web experience, and constructed a model of the relationship between pleasure, use motivation and user participation, which pointed out the factors that should be considered in the shopping site design(O'Brien, 2010).

It needs a better understand of user's needs to study the dimension of web experience. When building the web, it will improve the acceptant level of the e-commerce web, and improve consumer's purchase intention. However, due to the subjectivity of the site experience, the division dimension is complex, though many scholars have given the dimension of web experience, the quantitative research of web experience has yet to be improved.

## 2.3 The Measurement of Web Experience

There are some differences in the definition and composition of the web experience, and the constituent indexes of the web experience directly affect the choice of the website experience measurement method, which leads to the diversity of the website experience measurement method.

Web experience is the all reactions and results of the interaction process by user and the site, which has a strong subjective characteristic, so subjective measurement is generally based on the user's attitude to the use of the site. It is in the form of a questionnaire to obtain the web experience data, then figure out the score of each factor of the web experience, or establish the web experience evaluation model to determine the weight of the evaluation index and establish the relationship model.

There are some standardized web experience measurement scales, such as the PAD scale(Mehrabian, 1974), the PrEmo scale(Desmet P, 2004), and the utility and pleasure scale(Hassenzahl M, 2001), which are the most common used measurement methods. There are a number of more authoritative and mature scales available for the measurement, which are usually conducted by means of questionnaires. For the purpose of measuring the performance of the site, the web experience is divided into brand awareness, visitors, user experience, website response speed and interactivity(Yang, 2014). Web experience also should include website design, Reuters, reliability, trust and other factors, which from the aspect of technology(Lee & Lin, 2005). In the survey of web satisfaction, web experience include web usefulness, information quality and service interaction three aspects(Al-Manasra, 2013).

On the other hand, web experience information can be obtained from user interviews and user experiments, which aims to compensate for the shortcomings of subjective measurement. For example, web experience can be measured by some user's physiological indicators(Gouizi K. et al, 2011), facial expression recognition( Gorbunov R. et al, 2013), EEG experiment, eye movement experiment(Shi S W. et al, 2013). These methods are constantly being concerned and are considered to be scientific.

There are differences between the e-commerce site users, such as different cultural backgrounds, different preferences and different ages, these all will affect the web experience measurement, so it is necessary to consider

the impact of different user background in the measurement. The measurement of the web experience is a long-term tracking process, and the short-term measurement can not reflect the dynamic change of the web experience. The long-term measurement can measure all aspects of the web experience, but it is time-consuming and not easy to operate, and the data analysis is more difficult. So it is need to develop a set of scientific and practical means of the web experience measurement.

### **3. The Application of Web Experience**

With the development of e-commerce, the study of the web experience is more and more important. The e-commerce business websites often encounter the development bottleneck if they want to be young, so people begin to pay attention to the web experience, and they try to combined "user experience" and the actual work together. If we make the "user" into the site construction team in the company, this will be a really rewarding.

In recent years, many big e-commerce business enterprises regard the web experience as an important object. Since 1995, Amazon has become a recognized world leader in the field of e-commerce B2C, whose success is a direct result of a good web experience, and Amazon's website architects are able to highlight two important goals in the structure of the site: consumers can search and purchase products; sellers can quickly process orders and get profit. The site engineers create a very good online experience.

Jingdong is China's largest integrated website retailer and is one of the most popular and most influential e-commerce sites. In Jingdong company, a special user experience department was set managed directly by Jingdong's CEO Qiangdong Liu, which mainly to enhance the user experience, to promote the company's brand loyalty and make customer continued growth. The CEO Liu Qiang, who does a strong emphasis on web experience, spends a lot of time and energy on the establish of web experience.

Other e-commerce sites also target the user experience as a key research object. The site information architect refer to a honeycomb map which is used to describe the web experience when design the web, and this honeycomb map's center is customer value, The honeycomb also shows that a good user experience is not just referring to usability, but other important things in terms of usability. such as useful, findable, accessible, desirable, credible and valuable.

### **4. The Relationship between Web Experience and Purchasing Intention**

With the prevalence of e-commerce, there are more and more research on the intention of online purchase. Even in the same website, different groups of consumer will behave different as well, but there are always some rules worthy of our exploration. Scholars study the web experience and purchasing intention from the following different angles.

Through the study of online ticket booking user experience, empathy and trust are the most direct factors that affecting the user's purchase intention(Sam, 2009). Web experience can affect the user' perception of entertainment and operation procedure towards the web, and thus affecting the satisfaction and purchase intention. Compared with the information system quality, service quality of the web have a major impact on purchase intention(Hsu, 2012). Through the analysis of the data provided by 219 questionnaires, it is found that web experience has a negative correlation with consumer's perceived risks and a positive correlation with customer's emotional factors. Perceived risks have a negative impact on emotional factors, and perceived risks, emotional factors have a strong impact on purchase intention(Kim, 2013). In Ghalandar's empirical research, he analyzed the relationship between the online purchase intention of the user and the experience of the web, and it shows that the user's understanding and experience of the computer network also affect the purchase intention, the overall web experience has a significant impact on purchase intention(Ghalandar, 2012).

Yan Li conducted an empirical analysis on the behavior of internet consumers and web service quality home and abroad. The research shows that usability, care, interaction and design have a positive correlation with the purchase intention of B2C website users(Yan Li, 2009). Kai Zhong used the online reference as the adjustment variable in the study, and analyzed the relationship between the perceived value of consumer and the purchase intention. The results show that the perceived value and its three dimensions have a significant positive influence on purchase intention(Kai Zhong, 2013). There are some research on the trust of the e-commerce site, and some scholars study the dimension of the trust. The research shows that the trust element in web experience has a positive correlation with the online purchase intention(Xie En, 2012).

From above we can see that the factors that affect the purchase intention of the web are related to the quality of website, website technology, website design, shop atmosphere, etc.. In the study of consumer behavior theory, scholars mainly use TAM, SOR model to study the purchase intention of the site, which involves the ease of use, usefulness, store attributes, price, service, word of mouth, emotions, trust, perceived risk, etc., and they all will affect the purchase intention of the consumer.

Although many scholars put forward the evaluation model of web experience and purchase intention, but whether the division is effective, what's the relationship between every dimension of web experience, and when it changes, how it will affect the web experience, which all need to be taken into account when building a web experience model.

## 5. Conclusion and Outlook

Different from the aspect of usefulness and ease of use, this paper focuses on the research of the definition, measurement and evaluation system of web experience, and expounds the application of web experience today. The research shows that because of the different background of the research, the understanding of the web experience is different, and due to the subjectivity and time shaft, there have many different aspect in the study of web experience. The measurement dimension of web experience is lack of a authority method, and multi-directional, multi-index of the web experience evaluation methods need more study.If the e-commerce enterprises want to survive in this such competitive environment, it is important to pay more attention on the web design. The application of web experience is still in the initial stage, there are more research need to be developed.

Study on consumer purchase intention is relatively mature, but the previous study did not find that different kind of the website will bring different experience. The purpose of studying the web experience is to find the factors that affect the purchase intention, and we believe that by constantly optimizing the website design to enhance the user's loyalty, to provide consumers with a good experience, and promote sales and improve business income. Therefore, the future study can note the following point.

Previous study lacks of a comprehensive review of the web experience. Web experience is a combination of site quality and user experience. We should consider different characteristics of the site to study the components, measurement methods, evaluation system of web experience, and combine the different dimensions of web experience to test the interpretation of the web experience. The previous study did not form a quantitative evaluation of the web experience evaluation criteria, and how to compare the superiority of the evaluation method and the effectiveness of the model, how to enhance the web experience in the website design, specifically from which aspects to improve the user experience are also lack of detailed study.

When the web experience is integrated into a model, what factors are most influential to consumers' purchase intention, and which factors have little impact, they all will help the design of the site. The impact of web experience on consumer purchasing intention involves physiology, psychology, behavior science, decision science and other disciplines, and some research believe that trust factors have an impact on the purchase intention, and some think that the impact of perceived risk is strong, and some think emotion will affect the consumption. Those are the factors should be considered, and in different environments, the strength of the impact will be different. Therefore, in the study of consumer web experience we should take all the above factors to study the user's emotions, perception, decision-making and so on.

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