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## The influence of online interaction on consumers buying intention

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### ABSTRACT

Due to the rising of the network society, consumption structure has consequently changed. It is significance that studying in-depth on the influence of network interaction on buying intention. This article, from the perspective of flow theory, constructs a structural model of interaction, experience and buying intention, and proofs it through empirical research. The study found that people interaction affect partly the online experience, machine interaction positively affect the online experience, online experience positively affect the buying intention.

### KEYWORDS

Online interaction; Flow experience; Buying intention.



## INTRODUCTION

Due to the rising of the network society, consumption structure has consequently changed. The network consumption as a new consumption pattern became popular in the world. China Internet Survey data shows that the online shopping users reached 210 million, increased 8.2% compared with the end of 2011 users at the end of June 2012. Starting in 2011, the growth of online shopping users is gradually stable<sup>[1]</sup>. In the future, the development of online shopping market relies on not only the growth of the subscribers, but also the consumption depth. According to the Internet media and economic analysis, the particularity of the Internet is the "interaction" and "personal channels". Focusing on two features, there is only experience economy in accordance with internet industry. Network interaction is new forms of interaction of network users based on IT technology. Network interaction is communication and dialogue among network users in the network, is an extension of the real interaction in the virtual space. Because of online experience is different from the physical store experience, it is significance that studying in-depth on the influence of network interaction on buying intention, making marketing strategies for attracting more consumers to online shop.

## LITERATURE REVIEW

### Flow theory

Csikszentmihalyi (1975) first proposed the "Flow" concept. He believes that "Flow" is a state that body operating at maximum potential state. People can feel the flow in entertainment and daily activities<sup>[2]</sup>. Hoffman and Novak (1996) introduced flow experience into the network environment<sup>[3]</sup>. Subsequent studies defined the flow in accordance with Hoffman and Novak (1996) which are most about human-computer interaction and network activity. Although the names of the flow are difference, the essence is the same. The flow is a person state. During interacting with the action objects, people devote themselves wholeheartedly, forget the surrounding environment, and generate sense of losing self. This experience makes people feel their best, their own happiness, the most efficient moment.

The flow theory is one of the main theories of the experience theory. It is also part of consumer psychology. Flow theory can not only provide theoretical basis for online experience dimension of online shopping, online games and other virtual environment, but also opens up new ideas of studying on online experience and online consumer behavior based on psychology. Flow experience can attract consumers; reduce the consumers' price sensitivity; positively impact on the subsequent consumer attitudes and behavior.

### Online interaction

Previous studies have shown that the interaction is an important feature of modern media. Consumers and the sales staffs are no longer directly face-to-face in the network. On the contrary, the consumer experience through the network virtual screen designed and synthesized by the computer instead of physical environment. People participate in computer activities promote interaction generated<sup>[4]</sup>. Base on communication among people, interaction can be defined that information in turn related, especially the information can be used for later description. The interaction can be also defined as the need of mutual communications between communicators<sup>[5]</sup>.

In shopping, there will be positive consumer experience if the shopping website integrates use of rich content, positive understanding and cooperation. This interaction can not only be the interaction between people, but also the interaction between people and technology. The interaction can affect a person's knowledge or behavior at least. The communication of hypermedia environment is different

from the traditional environment. Based on the above studies, the interaction of online shopping will be divided into two kinds, one is people interaction, and another one is machine interaction.

## **REASEARCH HYPOTHESIS**

In the past few years, the flow theory in the information technology and computer controlled environmental context has been analyzed, and is recommended as the one of most accepted theory in online consumer experience theories.

The flow experience is difficult to define, since its operation, test, and application have many methods. However in the study of flow experience, we get some useful information from the emotional and cognitive factors which are intrinsic enjoyment, conscious control and concentration. The first two variables, also responded to those delightful factors as well as controlled over the physical environment<sup>[6]</sup>. This structure can be applied to the measurement of the dimension of the online consumer experience. Therefore, this article chooses intrinsic enjoyment, conscious control and concentration as the composition of the online experience dimension.

People interaction in online consumption is the consumers communicate with the sales staffs through website media. In the offline shopping environment, the people interaction is one of the important parts of the offline shopping environment. In the offline shopping, the people include not only the consumers and waiters, but also the other consumers at that time. Clearly, the people interaction between people is an important factor influencing consumers' perceived services. With the continuous development of network economy, the shopping websites achieve the interaction between consumers and sales staffs, including the interaction among consumers. The more people interaction the more the social existence consumers feeling, so people interaction influences the consumers' cognitive behavioral control<sup>[7]</sup>. On the basis of the above scholars' studies, this article hypothesizes that:

H1: People interaction will positively affect the online consumers' experience

H1a: People interaction will positively affect the online consumers' intrinsic enjoyment

H1b: People interaction will positively affect the online consumers' conscious control

H1c: People interaction will positively affect the online consumers' concentration

Machine interaction in online consumption is consumers participate with the website system. The information provided by the website and the degree of machine interaction affect the customer experience of shopping websites. With the increasing of the level of machine interaction in online shopping, the consumers' experience will be corresponding increased. The more relevant information for each product consumers get, the higher the experience consumers feel. In online media environment, the high level of machine interaction makes consumers feel more pleasure and excitement. On the basis of the above scholars' studies, this article hypothesizes that:

H 2: Machine interaction will positively affect online consumers' experience

H2a: Machine interaction will positively affect the online consumers' intrinsic pleasure

H2b: Machine interaction will positively affect the online consumers' conscious control

H2c: Machine interaction will positively affect the online consumers' concentration

Consumers usually evaluate activities according to inherent fun which is inner emotional response. The fact is this fun is measured by consumers with appropriate psychological scales<sup>[8]</sup>. In the case of online shopping, the inner happiness is shopping enjoyment. Past research has shown that the online shopping enjoyment is the decisive factor of consumer loyalty<sup>[9-11]</sup>. Similarly, the flow experience studies have shown that inner enjoyment can generate positive affects on the application of e-mail, computer softwares<sup>[12]</sup> and the network<sup>[8]</sup>. Therefore, we assume that shopping enjoyment will positively affect the online consumers' buying intention.

In the flow theory, the level of control had been defined as the control of a person and his corresponding behavior. For online consumers, the information environment will be very different between online consumption and the entity consumption. There will be many utilitarian consumers

because of the trivial time for shopping, and the explosion of online information and variety of products. The utilitarian consumers want more control, less effort and greater efficiency in the online shopping<sup>[9,10]</sup>. The characteristics of the network can solve these challenges and make it easier for consumers to find what they need through engine website and recommended agents. The more understanding of the product, the more quickly consumer find it online. All of these network characteristics make network consumers have high level of control and convenience<sup>[3]</sup>. Online consumers will have higher loyalty on the shopping website than others if the shopping website provides them a series of control. Therefore, we assume that control will positively affect the online consumers' buying intention.

Individuals in flow experience must focus on their activities. Therefore, the concentration and flow experience are closely related. Because of the limited time and information processing, the online consumers have short concentration. However, the degree of concentration is very important to complete the purchase effectively. The research shows that the concentration as a measurement of network experience have positive impact on the online consumers' experience and the intention of repeated using the shopping system. Similarly, we know that interference will affect the online consumers' online shopping satisfaction. Therefore, we assume that concentration will positively affect the online consumers' buying intention.

On the basis of the above scholars' studies, this article hypothesizes that:

Hypothesis 3: Online experience will positively affect online consumers' buying intention.

H3a: Intrinsic enjoyment will positively affect online consumers' buying intention.

H3b: Conscious control will positively affect online consumers' buying intention.

H3c: Concentration will positively affect online consumers' buying intention.

## **EMPIRICAL ANALYSIS**

### **Scale design and data collection**

This paper formulates the people interaction and machine interaction dimension referring to Hoffman and Novak (1996)<sup>[3]</sup>, Jyh-Jeng et al (2005)<sup>[13]</sup> research, the experience including intrinsic enjoyment and control and concentration dimension referring to Ghani et al (1991)<sup>[14]</sup> research, the buying intention dimension referring to Zeithaml, Berry & Parasuraman (2002)<sup>[15]</sup> research.

This paper analyses the data with SPSS 13.0 and AMOS5.0. There are two kinds of internet users who have representation and development potential including college students and company employees. So this paper chooses these two kinds people as research object. The formal survey is administered by the experimental center of a Zhejiang university which has a complete computer network facilities and an office building in Zhejiang region. All the survey objects are either university students or company employees. There were 500 questionnaires, 421 valid questionnaires, questionnaires. The questionnaire total effective rate was 84.2%. Sample Description

### **Analysis of reliability and validity**

This study uses software SPSS13.0 and adopts Cronbach's  $\alpha$  value to measure the reliability of each variable, taking Cronbach's  $\alpha$  value greater than 0.7 as standard. The running results show: the test index of people interaction, machine interaction, enjoyment, control, concentration and buying intention all are between 0.708 to 0.848, so we can say the research questions of each variable, to some degree, have internal consistency and stability.

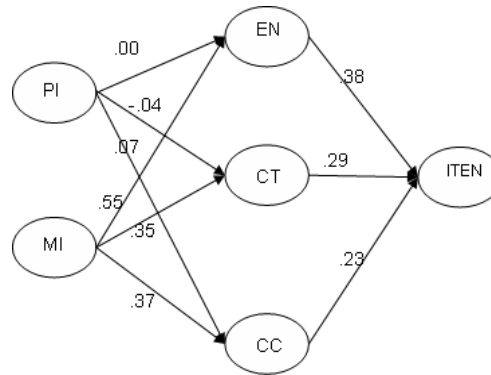
The study tests and constructs validity by using Confirmatory factor analysis. According to the result of SPSS analysis, all the factors' loading are above 0.55, reaching statistical significant or very significant level.

### **Structural equation analysis**

This study uses software Amos 5.0 to construct the structural model of observed variables and latent variables, latent variables and latent variable, determine the path coefficients between variables and test hypotheses.

Each fitting indicator of models mentioned above has reached the standard. The path coefficients obtained through the structural equation model show that:

The path coefficient of people interaction to control is 0.07. It means people interaction positively affect control. The path coefficient of people interaction to enjoyment is 0. It means people interaction has no influence on enjoyment. The path coefficient of people interaction to concentration is -0.04. It means people interaction negative affect concentration. So research hypothesis H1b is supported, H1a and H1 are not supported.



**Figure 1 : Path relationship and path coefficients of the structural model**

Machine interaction positively affect the enjoyment, control and concentration, the path coefficient are 0.29, 0.35 and 0.37. Machine interaction affects the online experience factors, the most obvious of which is concentration. So research hypothesis H2a, H2b, H2c are supported.

The online experience factors including enjoyment, control and concentration positively affect the online buying intention. The path coefficient are 0.38, 0.29 and 0.23. So research hypothesis H3a, H3b, H3c are supported.

## CONCLUSION

Shopping website should ensure the advantages of information resources through richness, effectiveness, usefulness and accuracy. At the same time, the website administrators should arrange the website outward appearances reasonable, the menu functions more convenient, the web interface beautifully vivid with multimedia technology, and the commodity pictures more clear and detailed. These means can make intangible services online tangible, allow consumers to fully impressed and experience the pleasure, so that the website can be tangible in the minds of the consumers

Interaction has significant positive impact on online experience. Website administrators can provide consumers with the tools and space to communicate with each other create interactive community, encourage information exchange between consumers and sellers. All of these can enhance the interaction quality, making consumers shopping on the website an immersive sense of pleasure, and optimal experience, the trading opportunities increased. This article shows that interactions between consumers and staffs have no significant effect online experience, as well as the interactions between consumers and machines have positive influence effect on the online experience.

In China, interaction between staffs and consumers is still an important part of online shopping in the many shopping websites. People living in different places communicate and online transactions conveniently because of the characteristics that network without borders and unlimited space. In the whole transaction process, consumers and staffs are rarely able to face-to-face contact which affects the

consumer website experience. The website should reduce the service interaction in consumer shopping process appropriately, improve shopping website page, improve network consumer self-service. Online shopping website should add self-service functions. There are many ways for consumer self-service, for example ATM, online banking, and remote education. Shopping website should provide consumers with shopping platform, as well as various types of modules. Consumers feel experience through self-design, self-production, self-consumption. When websites interact with consumers, the approach must be more targeted and personalized using information technology to provide consumers with advertises which have interactive effect and more machine interactive services. The shopping website should provide innovative online services such as analog situations with kind technology, so that the consumers are immersed among online shopping and feel a sense of pleasure which is unforgettable experience that accelerates consumers buying decisions.

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### REFERENCES

- [1] CNNIC. The Survey of Chinese Internet Network Hot topic, 10-21 (2011).
- [2] Csikszentmihalyi, M. Beyond Boredom, Anxiety; The Experience of Play in Work and Games. Jossey-Bass Publishers, San Francisco, CA, (1975).
- [3] Hoffman, L. Donna, Novak, P. Thomas; Marketing in hypermedia computer-mediated environments: Conceptual foundations. *Journal of Marketing*, July, **60**, 50–68 (1996).
- [4] T.H. Nelson; The right way to think about software design. *The Art of Human-Computer Interface Design*, Addison-Wesley, Reading, MA, (1990).
- [5] L. Ha, E.L. James; Interactivity re-examined: a baseline analysis of early business web site. *Journal of Broadcasting and Electronic Media*, **42(4)**, 457-474 (1998).
- [6] J.A. Russell; Affective Space Is Bipolar, *Journal of Personality and Social Psychology*, **37**, 345-356 (1979).
- [7] N. Sukpanich; Machine interactivity and person interactivity: The driving forces behind influences on consumers' willingness to purchase online. Doctor, the University of Memphis, (2004).
- [8] Hoffman, L. Donna, Novak, P. Thomas; How to acquire customers on the Web. *Harvard Business Review*, **78(3)**, 179–188 (2000).
- [9] Javenpaa, L. Sirkaka, Peter A. Todd; Is there a future for retailing on the internet? R. A. Peterson, ed. *Electronic Marketing and the consumer*. Sage, Thousand Oaks, CA, (1997a).
- [10] Javenpaa, L. Sirkaka, Peter A. Todd; Consumer reactions to electronic shopping on the world wide web. *Internet Journal of Electronic Commerce*, **1(2)**, 59-88 (1997b).
- [11] Eighmey John, Lola McCord; Adding value in the information age: Uses and gratifications of sites on the world wide web. *Journal of Business Research*, **41(3)**, 187-19 (1998).
- [12] Webster, Jane, Trevino, K. Linda, Ryan, Lisa; The dimensionality and correlates of flow in human computer interactions. *Computers in Human Behavior*, **9(4)**, 411–426 (1993).
- [13] Jyt-Jeng Wu, Yong-Sheng Chang; Towards understanding members' interactivity, trust, and flow in online travel community *Industrial Management*, **105**, 7935-954 (2005).
- [14] Ghani, A. Jawaid, Satish P. Deshpande; Task characteristics and the experience of optimal flow in human-computer interaction. *J. Psychology*, **128(4)**, 381-391 (1994).
- [15] Zeithaml, A. Valarie, A. Parasuraman, Arvind Malhotra; Service Quality Delivery through Web sites: A critical review of extant knowledge. *Journal of the Academy of Marketing Science*, **30(4)**, 362-75 (2002).