

# The Influences of E-service Quality according to Image Interactivity Technology on Customer Loyalty and Purchasing Involvement

The influences  
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**Abstract** This study investigates the differences of e-service quality depending on image interactivity technology and the influences of e-service quality on purchasing involvement and customer loyalty. Online shopping malls have made toward satisfying customers' shopping experience owing to the advance of technology. Above all, it is important to prove effectiveness of this technology to introduce it. Therefore, the purpose of this study is to test effectiveness of Image Interactivity Technology (IIT) which has been introduced by some shopping malls. For this study three shopping malls were designed as stimuli that have the different level of IIT. The women of 20-30 who have bought fashion products in online shopping malls participated in the quantitative research. Total 592 were used for the statistical analysis. Descriptive statistics, cross tabulation analysis, factor analysis, reliability analysis, one-way ANOVA, and multiple regression were implemented. Four factors of e-service quality were extracted. The 3D avatar shopping mall was higher than the others in those factors. Besides, e-service quality factors influenced purchasing involvement and customer loyalty. Therefore, online shopping malls are advised to introduce IIT and improve e-service quality

**Key words** Image Interactivity Technology, E-service Quality, Purchasing Involvement, Customer Loyalty

## Introduction

Over the last half a century, the development of online and web technology has transformed the global logistics market. Online shopping malls have become the main pillar of the consumer market along with offline, whereas only physical and offline markets were the mainstream in the past. The overall Korean online market topped a growth rate of 20 percent in 2008. Among the market players, the scale of online clothing and fashion businesses totaled at 726 billion won in the first quarter of 2008, jumping by 13.4 percent year on year. Furthermore, clothes are the most commonly traded item online(Hansen & Jensen, 2009). However, clothes are experience goods(Peterson et al., 1997),

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and their fits and colors are critical factors in purchasing decisions. Unlike in the offline markets, consumers are highly aware of risks of online shopping since they are not able to physically contact with products but have to rely on the information provided by the website where they make a purchase. Accordingly, e-retailers should provide useful information for consumers by introducing appropriate methods to post information and thus help them make a reasonable decision. Although studies have been conducted on online shopping as more consumers have shifted to online, they have yet to identify what characteristics attract more people to online and produce loyal customers. In particular, fashion items of which fits and colors are important factors have limits to showing their exact properties online. Against this backdrop, e-retailers have tried to adopt new technologies to provide detail information and boost customer satisfaction by offering offline purchase experience. A prime example of such effort is the image interactivity technology or IIT. IIT is a distinct characteristic of website which enables the creation and manipulation of product images on a retailer's website in order to affect experiential and instrumental value(Fiore et al, 2002). The technology allows altering the feature, background context, and/or viewpoint of a product design, activates product operation on the web and provides more detail information about products via visual clues. In addition, it renders a feeling of life-like environment where consumers walk around to enrich their experience and stimulate a sense of navigation. While advanced technology has made such online experience possible, few e-retailers have adopted it so far and the effect has to be verified. In order words, even though IIT does appeal to consumers, it is still in question whether their interest and visits will continue. Another critical aspect is how the information provided by IIT is recognized by customers. Therefore, this study is to investigate how IIT, an important characteristic of web design, affects consumers' perceived quality of clothes sold in the online shopping mall, to empirically examine the influence of service quality on customer loyalty and purchasing involvement, and to propose a new strategy to help e-retailers provide a useful shopping environment for consumers.

### *Literature Review*

#### **Image Interactivity Technology (IIT)**

Society has reached the experience economy beyond the industrial economy and the most recent service economy(Pine & Gilmore, 1999). Accordingly, companies have made ceaseless efforts such as customizing information and manipulating images when providing information on their websites in order to maximize interactive communication with their customers. Interaction with customers may encourage purchasing intention and positive attitude of customers towards the companies or shops(Fiore et al, 2002; Li et al, 2001). In addition, Hogue and Lohse(1999) found that interaction with customers was critical to their repeated visits. According to Li et al.(2001), IIT is a common feature of most visited shopping malls, a stimulant to shopping experience and thus expected to frequently appear in online marketing activities.

Meanwhile, e-retailers are able to closely interact with customers when providing product information by IIT images and the interaction may be divided into three levels. The lowest level is represented by a 2D image picture. With such picture, customers simply experience the visual, but fail to involve in manipulation. In fact, 84 percent of online retailers rely on those flat images(Fiore

et al, 2005). On the other hand, higher interactions can be made by features like Zoom-in and Mix & Match showing what combinations of different products look like. Those technologies induce deeper consumer involvement by enabling them to enlarge product images and coordinate different products. In Korea, shopping websites like www.fashionpia.co.kr have adopted such technology. 3D virtual model can establish the closest and highest interaction with customers among technologies that have been developed so far. E-retailers including Land's end and H&M have commercialized the 3D model. Those websites provide customized and personalized information to customers by allowing them to choose and apply clothes to an avatar that has the same size as themselves. Furthermore, the avatars offer them with more chances to actively manipulate images like rotating 360 degree. According to Kim et al.(2007) studies on relations between IIT and consumers' characteristics, IIT statically affects consumers' involvement and perception toward shopping malls, which respectively affect consumers' desire to stay in the shop and their loyalty.

The influences  
E-service  
Quality  
according to  
Image  
Interactivity  
Technology on  
Customer  
Loyalty and  
Purchasing  
Involvement

### **E-service Quality**

E-retailers have sought to identify the effects of providing information and services on their website on customer satisfaction and re-visits. Studies have been carried out to verify the relations between service quality and customer satisfaction, and found that e-service quality had meaningful effects on customer satisfaction and e-loyalty(Kim et al, 2009). Service quality is defined as the level of customer expectations and perception toward services(Parasuraman et al. 1985), and SERVQUAL was designed to measure the quality. However, evaluation scales for online service quality have yet to be improved and are mostly based of scales developed for offline or traditional information system (Aladwani & Palvia, 2002; Hong & Beak, 2006). Traditional SERVQUAL was devised to identify strengths and weaknesses of service quality and confined to offline enterprises(Kim et al, 2009). Consequently, research has been conducted to establish online service quality evaluation models, and developed models including WebQual and E-Zeithaml so far. According to Zeithaml(2000), E-SERVQUAL is an evaluation model for e-service quality, and e-service refers to how much a website can promote efficient shopping, purchase, product delivery and relevant services. On the other hand, WebQual was born in England in 1998 and has extensively been utilized in the e-commerce sector. As a result, continuous revisions and comprehensive studies have polished and further improved the model to version 4.0 from its original 1.0, and applied to various fields. WebQual is now being widely adopted to assess users' perception towards websites and to compare companies in the same industry or an industry by time period(Barnes & Vidgen, 2001). In comparison with other evaluation methods including E- Zeithaml(2000), WebQual shows distinctive features as follows(Barnes & Vidgen, 2001; Hong & Beak, 2006). Each question comprising of WebQual has firm theoretical backgrounds based on precedent studies, and has endorsed a wide range of fields such as information system marketing and interaction between humans and computers. The scale has extensively accommodated experts' opinions through workshops and seminars and taken advantage of strengths of SERVQUAL. In addition, such wide adoption has confirmed its credibility and validity as a common tool to evaluate websites. WebQual 2.0 designed by Barnes and Vidgen(2001) based on service determining factors in Internet book stores, explains consumers' perceived quality on the grounds of on-line interactivity. In order words, the version 2.0 adds the "interactivity quality" to WebQual 1.0 that

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dealt with convenience of use, experience and communication aspects. Therefore, this study is to verify difference in e-service quality levels in accordance with IIT levels and the effects of IIT, and examine the influence of e-service quality on consumer behavior such as purchasing involvement and loyalty in order to propose a useful Internet shopping environment for consumers.

### **Purchasing Involvement**

Involvement refers to consumers' interest and desire to products and services(Chen & Lee , 2005; Zaichkowsky, 1985), and a level of perceived significance or interest triggered by a certain condition (Lim et al, 2006). Purchasing involvement specifically deals with the interest that consumers express in purchasing decisions(Seo, 2005), and means an association that consumers perceive in the course of making a purchase. According to Kim et al(2007), involvement is how much consumers value their online experience on the website and relates themselves to the website when purchasing fashion products. Such involvement turns out to have meaningful relations with consumers' desire to stay on the website and intention to patronize and thus serve as a useful variable to verify website effects. Consequently, service quality of websites is expected to have meaningful influence on purchasing intention.

### **Customer Loyalty**

Previous studies claim that relations between a company and its customers affect their loyalty which, in turn, the company makes use of to secure a competitive edge. Loyal customers put emphasis on interactive relations in transaction, while others put economic values ahead(Jain et al, 1987). E-retailers who maintain loyal customers may boost their profitability by preventing consumers from moving to other web sites. Under this circumstance, identifying factors that affect customer loyalty is critical to their survival.

Kim et al(2009) found that convenience of use and the look of websites affected customers' satisfaction which leads to their loyalty to the website. Suh et al(2008) proved that service quality of e-retailers had influence on credibility and loyalty. Therefore, e-service quality is expected to influence customer loyalty.

To measure customer loyalty, there are two approaches: attitudinal approach and behavioral approach. Attitudinal approach evaluates loyalty based on customers' attachment and positive attitude to products and services. On the other hand, behavioral approach assesses loyalty by intention to repeat purchasing, repetition and frequency of purchase, and recommendation to others. However, the two techniques are subject to errors since favorable attitude toward products and services does not necessarily lead to purchasing. As a result, Dick and Basu(1994) pointed out limits of previous evaluation models and suggested a two dimensional loyal evaluation model factoring in both relative attitude and repeated purchasing behavior. Such two dimensional approach enhances the accuracy in predicting customers' purchasing behavior. Therefore, this study measures customer loyalty to online shopping malls by utilizing the two dimensional evaluation models.

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## Methods

### Research Questions

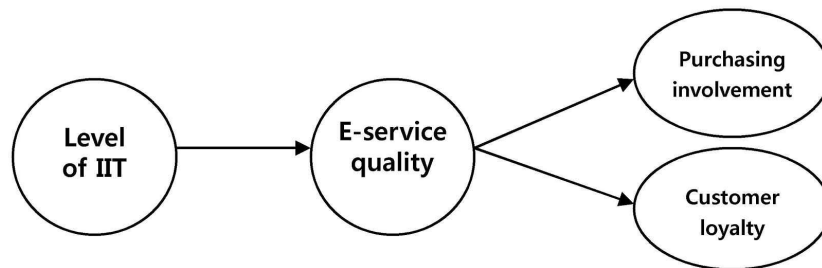
This study is to identify difference in online service quality according to IIT and to empirically examine the influence of service quality on purchasing involvement and loyalty in order to propose a useful strategy to help e-retailers provide better shopping environment for their customers. The research questions and models of this study are presented in <Figure 1>.

First is to identify difference in online service quality according to IIT.

Second is to identify online the influence of service quality on purchasing involvement.

Third is to identify online the influence of service quality on customer loyalty.

The influences  
E-service  
Quality  
according to  
Image  
Interactivity  
Technology on  
Customer  
Loyalty and  
Purchasing  
Involvement

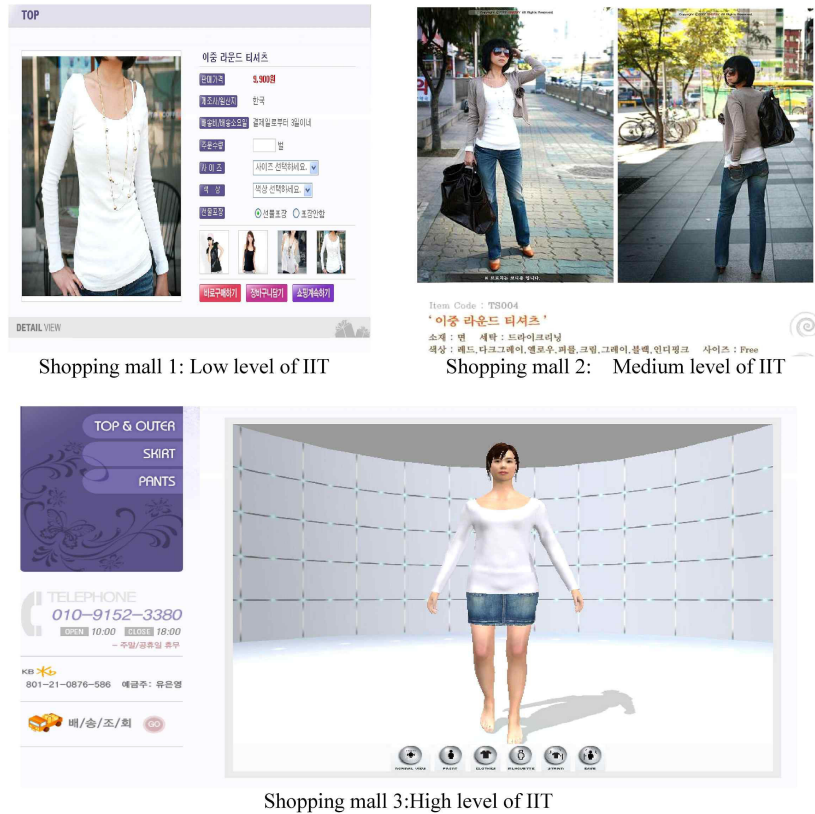


**Figure 1.**  
Research model

### Measurement

Three online shopping malls with different levels of IIT were established. The shopping mall 1 with the lowest IIT level displays only 2D images of individual items and, the shopping mall 2 with mid-level of IIT provides 2D images of coordinated fashion items. The shopping mall 3 with the IIT highest level provides 3D avatars to which customers try clothes on. Other conditions such as shopping mall name, country of origin(Korea) and delivery(within three days) are exactly the same only except their IIT levels. The three websites post the same product names, prices and descriptions and look like a real-life online shops as presented in <Figure 2>.

WebQual 2.0 questionnaires used in this study are based on 24 questions of Barnes and Vidgen (2001), four questions of Kim et al (2007) about purchasing involvement and four question of Scarpi (2006) about customer loyalty. The questionnaires is measured by 7-point Likert scales (from 1: Not at all to 7: Extremely true), and has demographic questions including age, job, household income and average monthly spending on clothes.



**Figure 2.**  
Stimuli used in this research

**Data Collection and Analysis**

To conduct empirical research, this study confines its subjects only to women in their 20s(87.3%) and 30s(72.4%) who are the most frequent visitors and active customers of online shopping experience according to the “2008 Internet use in Korea” report by Korea Broadcasting and Telecommunications Commission and Korea Internet & Security Agency. They answered the questionnaires after choosing one of the three websites presented above, browsing on it, and experiencing every purchasing process to final payment just like in a real shopping mall. The survey was conducted from May 26 to June 2, 2008 and 592 of them were analyzed. Each shopping mall one, two and three has 189, 187 and 216 subjects respectively. Among them, 300(50.7%) were in their 20s and 292(49.3%) in their 30s. Chi-square tests revealed no significant difference in their demographical characteristics as presented in <Table 1>. SPSS for Windows 12.0 was utilized to perform descriptive statistics, factor analysis, reliability analysis, one-way ANOVA, Duncan test and regression analysis.

**Table 1.**  
Homogeneity analysis of the respondents

	$\chi^2(df)$	p
Age	2.42(2)	0.30
Occupation	20.05(16)	0.09
Monthly total income	10.27(16)	0.79
Average monthly spending on clothes	5.31(10)	0.87

The influences  
E-service  
Quality  
according to  
Image  
Interactivity  
Technology on  
Customer  
Loyalty and  
Purchasing  
Involvement

## ***Results and Discussion***

### **Exploratory factor analysis and Reliability analysis**

Ten factors are derived from a precedent study(Son & Lim, 2004) on online service quality of web-sites based on WebQual 2.0. In some cases, one question consisted of one factor in the previous research. However, this study designates more variables in order to more comprehensively accommodate different dimensions of the factors. As four factors were extracted, the explanatory variance was highest. Therefore, six questions out of 24 were eliminated and the rest 18 were subject to final factor analysis as presented in <Table 2>.

First, four major factors in online service quality are extracted. Factor one is named convenience of use that asks whether the website is easy to find your way around, return to the previous page, search items, navigate and process transactions and provides delivery schedules. Factor two is dubbed site design that asks whether the website has items that you expected, a good reputation, an attractive appearance and an appropriate style fit into its characteristics and guarantees services or products. Factor three is labeled as reliability that asks whether the website provides that is easy to understand, confidence that it will deliver products or services on time, easy contact with the managers and information at an appropriate level of detail. Factor four is called customization that asks whether products and services on the websites are customized or can be customized, and communication among consumers is easy. The explanatory variate stands at 80.6 percent and each reliability coefficient exceeds 0.9, delivering high internal consistency.

Questions about purchasing involvement and loyalty were analyzed by Varimax rotation of principal component analysis with the initial value of one and the results reveals that each item is converged on a single factor. The explanatory variate of purchasing involvement is 88.72 percent and loyalty 86.31 percent. Each discloses reliabilities of 0.958 and 0.947 respectively, maintaining high internal consistency as presented <Table 3>.

**Table 2.**  
Exploratory factor analysis and reliability analysis of e-service quality

Factor	Items	Factor loading	Eigenvalue	% of Variance (80.6%)	Cronbach's alpha
Factor 1 Convenience to use	Is easy to find and to return to	.805	4.107	22.81	.925
	Is easy to find your way around	.727			
	Has fast navigation to information	.702			
	Can process transactions competently	.673			
	Gives a time of delivery for products or services	.619			
Factor 2 Site design	Has things where you expect to find them	.732	3.842	21.34	.942
	Is a site with a good reputation	.725			
	Has an attractive appearance	.641			
	Guarantees services or products offered	.625			
	Has an appropriate style of design for site type	.608			
	Provides up-to-date information	.614			
Factor 3 Trust	Provides information content that is easy to understand	.768	3.650	20.27	.916
	Gives confidence that it will deliver products or services	.690			
	Makes it easy to give feedback or contact the organization	.706			
	Provides information at an appropriate level of detail	.664			
Factor 4 Customization	Can customize products or prices	.768	2.908	16.15	.927
	Provides content tailored to the individual	.738			
	Communicates information in an appropriate format	.687			

**Table 3.**  
Factor and Reliability Analysis on Purchasing Involvement and Loyalty

Factor	Items	Factor loading	Eigenvalue	% of Variance (80.6%)	Cronbach's alpha
Purchasing involvement	This shopping mall creates a shopping experience that is of concern to me	.950	3.549	88.72	.958
	This shopping mall creates a shopping experience that is relevant	.945			
	This shopping mall creates a shopping experience that means a lot to me	.942			
	This shopping mall creates a shopping experience that is important to me	.935			
Customer loyalty	I will recommend this shopping mall to other people	.945	3.453	86.31	.947
	I will use this shopping mall in the future	.940			
	I will enjoy spending money in purchasing	.932			
	It seems to buy more items than I expected to	.898			



### E-service Quality according to IIT level

To identify difference in online service quality according to IIT, ANOVA was conducted with independent variables of the three shopping malls and a dependent variable of e-service quality. The analysis utilizes average value of four factors of e-service quality, and Duncan test was accompanies. The result is presented in <Table 4>.

As for convenience of use, three shopping malls deliver no meaningful difference. When it comes to the site design factor and reliability, service quality of shopping mall two and three is perceived meaningfully higher than mall one. In terms of customization, shopping mall three is meaningfully higher than the others. To sum up, better IITs lead to higher e-service quality satisfaction with web design, reliability and customization. However, shopping mall three makes no meaningful difference in convenience of use, indicating that although shopping websites with introducing 3D avatars require extra efforts from consumers to try clothes on the avatars, users do not feel inconvenience. In order words, shopping sites capitalizing on 3D avatars may require more user involvement than others. However, this study confirmed that consumers found no inconvenience from such involvement. Shopping websites offering 2D pictures of coordinating fashion items and 3D avatars secure higher recognition in site design and reliability than websites showing single-item pictures only, but there is no meaningful difference between the first two types. On the other hand, 3D avatar system delivers a meaningful difference in customization factor.

**Table 4.**  
E-service quality according to IIT level

Factor	F-value	Post hoc		
		Shopping mall 1	Shopping mall 2	Shopping mall 3
Convenience to use		Null		
Site design	3.057*	4.25 <sup>a</sup> B	4.45 A	4.46 A
Trust	3.386*	4.33 B	4.52 A	4.55 A
Customization	3.181*	4.12 B	4.27 AB	4.37 A

Post hoc (Duncan Test)  $A > B$ ,  $*p < .05$

<sup>a</sup> Mean of factor (1-7)

### Effects of E-service Quality on Purchasing Involvement and Customer Loyalty

To examine the influence of e-service quality on purchasing involvement and loyalty, multiple regression analysis is conducted with independent variables of e-service quality factors and dependent variables of purchasing involvement and customer loyalty as presented in <Table 5>.

The result suggests that all factors of e-service quality significantly affect both purchasing involvement and loyalty. When it comes to purchasing involvement, site design has the largest influence(0.483), followed by convenience of use(0.407), customization(0.361) and reliability(0.310). That is, if a website provides products that consumers expect and attractive web design, such character-

istics have significant influence on shoppers who put high values on shopping experience. Next factor is convenience of use that offers easy search and navigation on the website. Product or service customization is ranked third, followed by detail information and description about products. In terms of loyalty, site design(0.553) tops the list, followed by customization(0.342), reliability(0.337) and convenience of use(0.313). Customer loyalty consists of intention to purchase, re-visit and recommend the website. Customer loyalty also turns out to be most affected by website design like purchasing involvement, and customization and reliability come at second and third on the list. Unlike purchasing involvement, convenience of use has the least influence on customer loyalty.

**Table 5.**  
Effects of e-service quality on purchasing and customer loyalty

Independent variable \ Dependent variable	Purchasing involvement		Customer loyalty	
	$\beta$	t-value	$\beta$	t-value
Convenience to use	0.407	18.545***	0.313	14.393***
Site design	0.483	23.295***	0.553	26.921***
Trust	0.310	13.937***	0.337	15.273***
Customization	0.361	16.690***	0.342	15.931***
Adjusted R <sup>2</sup> (F-value)	0.745 (440.380***)		0.749 (451.555***)	

\*\*\*  $p < .001$

To sum up the survey result stated above, service quality factors do have significant effects on purchasing involvement and customer loyalty. In addition, better IITs like 3D avatars or coordinating items generate better consumers' perception toward service quality except convenience of use. In particular, as website design is proved to affect both purchasing involvement and loyalty the most, on-line fashion retailers are advised to provide better IIT-based user experience than single-item pictures only. To this end, it is recommended to ceaseless develop and adopt advanced technologies to better represent information.

### **Conclusion and Implication**

With the fierce competition in the online market, e-retailers are required to make strenuous efforts to keep consumers staying longer on their websites. Clothes are particularly different from other goods in that consumers want direct contact with the items. However, as online shopping cannot offer first-hand experience by its nature, consumers perceive higher risks and put extra efforts in order to make a right choice. Therefore, online shopping malls should do their best to provide accurate information and experience similar to experience to that of offline stores for customers to boost their satisfaction. So far, studies have failed to identify what type of shopping environment online clothes retailers have to establish. Furthermore, even though advanced technology has made it possible to provide better shopping environment for customers, it is too premature to confirm the outcome. Therefore, this study is designed to verify the effect of IIT which is still in its infancy, and ultimately to propose a

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new strategy that enables online shopping retailers to establish efficient and useful shopping environment. To this end, this study set up three shopping malls with different levels of IIT as stimulants. Survey was conducted on women in their 20s and 30s with online shopping experience. The respondents were asked to choose and shop at one of the three virtual shopping malls, and answer the questions. Analysis was based on 592 questionnaires and the result is as follows.

First, factor analysis extracted four major factors in online service quality. Factor one is named convenience of use that asks whether the website is easy to find your way around, return to the previous page, search items, navigate and process transactions and provides delivery schedules. Factor two is dubbed site design that asks whether the website has items that you expected, a good reputation, an attractive appearance and an appropriate style fit into its characteristics and guarantees services or products. Factor three is labeled as reliability that asks whether the website provides easily understandable information, confidence that it will deliver products or services on time, easy contact with the managers and information at an appropriate level of detail. Factor four is called customization that asks whether products and services on the websites are customized or can be customized, and communication among consumers is easy.

Second, in the analysis of the difference in online service quality according to IIT, three out of the four factors excluding convenience of use deliver significant difference. Both types of shopping malls introducing 3D avatars and 2D pictures of coordinating items makes meaningfully better result in site design and reliability factors than that with single-item pictures only, and 3D avatar shopping mall is meaningfully better than the others in customization factor. In order words, perceived service quality is higher in shopping malls with higher IITs like 3D avatars or better coordinating fashion item displays. Furthermore, consumers show no inconvenience about their involvement in the 3D imaging system, indicating that consumer embracement is not a critical aspect to the introduction of IITs.

Third, in the analysis of the effects of e-service quality on purchasing involvement, all the four factors affect purchasing involvement with the significance order of site design, convenience of use, customization and reliability. Such result implies that purchasing involvement may be encouraged by securing products that customers want, a good reputation and attractive appearance along with ease of use, since purchasing involvement is an association with consumers by providing online shopping experience and thus has them put significance on the experience. In the analysis of the effects of e-service quality on loyalty, all the four factors also have effects on loyalty with the significance order of site design, customization, reliability and convenience of use. Loyalty which can be construed as customers' intention to visit the website again in the future and recommend it to others is proved to be largely affected by shopping mall design and customization factors.

In conclusion, better IITs-such as displaying 3D avatars or 2D pictures of various coordinating items-enhance consumers' perceived service quality. Furthermore, considering online service quality factors have significant influence on customer loyalty and purchasing involvement that promotes association with customers, it is possible to suggest a new shopping mall design strategy with advanced IITs.

This study, however, is based on virtual online shopping malls that are not exactly the same as commercial online shops. Therefore, it is recommended to proceed with new studies on actual online

The influences  
E-service  
Quality  
according to  
Image  
Interactivity  
Technology on  
Customer  
Loyalty and  
Purchasing  
Involvement

retailers and customers. In addition, considering that the 3D avatar mall fail to deliver significant difference from the 2D coordinating shop only except customization, more variables should be examined to identify differentiation factors for 3D malls.

### Reference

- Aladwani, A. M., & Palvia, P. C. (2002). Developing and validating an instrument for measuring user perceived web quality. *Information and management*, 39(6), 467-476.
- Barnes, S. J., & Vidgen, R. (2001), An Evaluation of Cyber-Bookshops; The webqual Method. *International Journal of Electronic Commerce*, 6(1), 11-30.
- Chen, W. J., & Lee, C.(2005). The impact of website image and consumer personality on consumer behavior. *International Journal of Management*, 22(3), 484-496.
- Dick, A. S., & Basu, K.(1994). Customer Loyalty; Toward an Integrated Conceptual Framework, *Journal of the Academy Marketing Science*, 22(2), 99-113.
- Fiore, A. M., Jin. H. J, & Kim, J. H. (2005). For fun and profit: hedonic value from image interactivity and responses toward and online Store. *Psychology & Marketing*, 22(8), 669-894.
- Fiore, A. M., Lee, S. E., & Kunz, G. (2002). Individual differences motivations, and willingness to use a mass customization option for fashion product. *European Journal of Marketing*, 38(7), 835-849.
- Hansen, T., & Jensen, J. M. (2009). Shopping orientation and online clothing purchases: the role of gender and purchase situation. *European Journal of Marketing*, 43(9/10), 1154 - 1170.
- Hogue, A. Y., & Lohse, G. L. (1999). An Information Search Cost Perspective for. Designing Interface for Electronic Commerce. *Journal of Marketing*, 36(3), 387-394.
- Hong, S., & Beak, S. (2006). A study on the Internet bookstore service quality through the application of the WebQual measurement. *The Korean academic association of business administration*, 19(5), 1895-1912.
- Jain, A. K., Pinson, C., & Malhotra, N. K. (1987). Customer loyalty as a construct in the marketing of banking service. *International Journal of Bank Marketing*, 5(3), 19-72.
- Kim, J. H., Kim, M., & Kandampully, J. (2009). Buying environment characteristics in the context of e-service. *European Journal of Marketing*, 43(9/10), 1188-1204.
- Kim, J. H., Fiore, A. M., & Lee, H. H. (2007). Influence of online store perception, shopping enjoyment, and shopping involvement on consumer patronage behavior towards an online retailer. *Journal of Retailing and Consumer Services*, 14(2), 95-107.
- Li, H., Daugherty, T., & Biocca, F. (2001). Characteristics of virtual experience in electronic commerce: A protocol analysis. *Journal of Interactive Marketing*, 15, 13 - 30.
- Lim, J. Kim, J. Hong, S. & Yi, Y. (2006). *Consumer behavior-3th*. Seoul: Kyungmoon.
- Parasuraman, A., Zeithaml, V.A., Berry, L.L. (1985), A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41-50.
- Pine, B. J, & Gilmore, J. H. (1999). *The experience economy: work is theater & every business a stage*. Boston: Harvard Business School Press.
- Peterson, R. A., Balasubramanian, S., & Bronnenberg, B. J. (1997). Exploring the implications of the internet for consumer marketing. *Journal of the Academy of Marketing Science*, 25(4), 329-46
- Scarpi, D. (2006). Fashion store between fun and usefulness. *Journal of Fashion Marketing and Management*, 10(1), 7-24.
- Seo, Y. (2003). *Winning strategy of marketing*. Seoul: Window of times.

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- Son, D. & Lim, J. (2004). The application of the evaluation models towards the Internet business web site model. *IE Interfaces*, 17(1),33-45.
- Suh, H. S, Heu, J. H., & Na, Y. K. (2008). The effect of service quality, WOM(aternate), and reputation of on-line shopping mall on the trust and loyalty. *Journal of Korean society clothing industry*, 10(5), 607-617.
- Valander, S. (2007). Online information quality inexperiential consumption: An exploratory study. *Journal of Retailing and Consumer*, 14, 328-338.
- Wakerfield, K. L. & Inman, J. J. (2003). Situational price sensibility: the role of consumption occasion, social context and income. *Journal of Retailing*, 79, 199-212.
- Zaichkowsky, J. L. (1985). Measuring the involvement construct. *Journal of Consumer Research*, 12(3), 341-352.
- Zeithaml, V. A. (2000). Service quality, profitability, and the economic worth of customers: what we know and what we need to know. *Journal of the Academy of Marketing Science*, 28, 67-86.

The influences  
E-service  
Quality  
according to  
Image  
Interactivity  
Technology on  
Customer  
Loyalty and  
Purchasing  
Involvement