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UNDERSTANDING THE ADOPTION OF ONLINE LANGUAGE LEARNING BASED ON E-MARKETING MIX MODEL

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ABSTRACT

This paper presents a quantitative study on the adoption of online language learning based on the e-marketing mix model. The Internet has changed the business context of many industries. Online language learning is one of the rapidly growing industries. Due to globalization and the high population in China, there is a huge potential in the market for online language learning. In this study, the Chinese language learners' adoption of online language learning is analyzed. The purpose of this study is to evaluate the impact of Chinese language learners' perceptions of e-marketing mix elements on their adoption of online language learning products. The results show that perceived product, perceived privacy, perceived community, perceived site and perceived sales promotion all have a positive impact on behavioral intention of adopting online language learning; while perceived security and perceived customer service have a negative impact on behavioral intention of adopting online language learning. The results of this research provides guidance for web site designers to develop more effective online language learning platforms.

Keywords: E-Marketing Mix, E-Marketing Tools, Online Language Learning, Online Education

INTRODUCTION

Online education in China has become a popular market with an estimated 12.62 billion USD market in 2013 and with a predicted growth to 26.06 billion USD by 2017 [26]. In Figure 1, online language learning is in the top three largest categories of the online education market in China, occupying 18.7% of the total market share of the Online Education Market in 2014 [48]. The market value of online language learning in China reached 2.91 billion USD in 2014, a 23.7% increase and it is predicted to reach 5.33 billion USD in 2017 [10].

A large amount of venture capital has been invested in online language learning [51, 46]. However, reports revealed that the online language learning business may not be as profitable as is predicted. In 2014, the monthly revenue of the top two online language learning companies were 0.6 million USD and 3 million USD respectively [8]. After taking their investment cost

into account, making a high profit seems to be difficult. One of the main barriers to making a high profit is the high expenditure on search engine marketing [9] and the low charges for the courses [56]. The objective of this research is to analyze the impact of Chinese language learners' perceptions of e-marketing mix elements on their adoption of online language learning. If online language learning businesses can evaluate the effectiveness of the e-marketing mix elements accurately, their profits can certainly be increased.

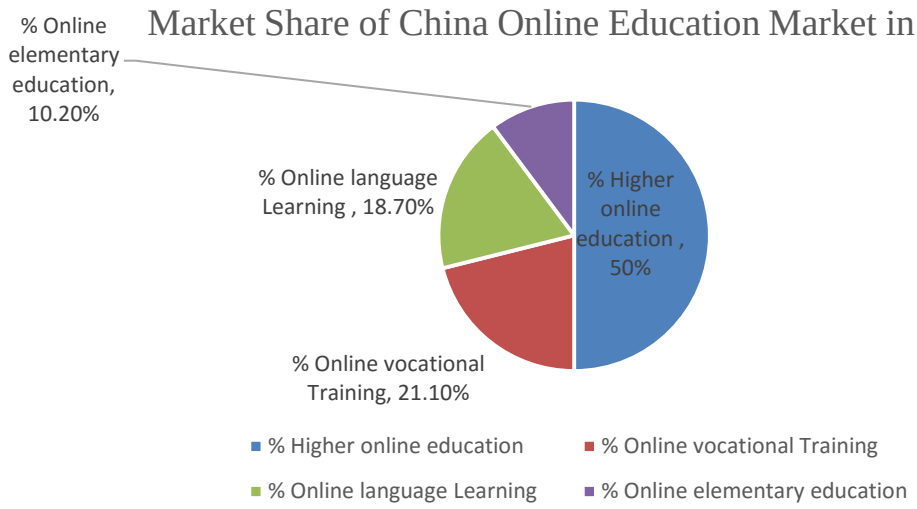

Figure 1**:** Market Share of China Online Education Market in 2014 [48]

THEORETICAL BACKGROUND

From the marketing perspective, price is one of the fundamental elements of the traditional marketing mix model; namely 4Ps model (Product, Price, Place and Promotion). In order to avoid a price war, companies should pay attention to other marketing elements rather than price. Traditional marketing mix models such as 4Ps model neglected new elements in the e-commerce environment. Hoffman and Novak [23] encouraged marketers to develop new marketing mix models in the context of the Internet. Following this issue, several new e-marketing mix models have been developed to replace the traditional 4Ps model in the digital marketplace such as 4Cs model [33], 4Ss model [11], 8Ps model [16], and 4Ps+$P^2C^2S^3$ model [29].

4Cs model

Within the increased level of competition, the focus of the marketing mix model has shifted from product-oriented to customer oriented and the 4Cs model (Customer, Costs, Communications and Convenience) was developed for the purpose of identifying customers' needs, evaluating all the costs involved in satisfying customers, maintaining good communication with customers and providing convenience to customers when they purchase products or services on the web sites.

4Ss model

The 4Ss model is referred to as a web marketing mix model that includes four elements: i) Scope which involves identifying the objectives of online business and analyzing the current market position in the industry; ii) Site which focuses on how to achieve E-Commerce on the web site; iii) Synergy which focuses on how the web sites can integrate with internal and external entities such as internal organizational process, database and external business partners; iv) System which involves hardware and software support for the website management.

8Ps model

The 8Ps model includes the traditional 4Ps as their core elements and adds four more elements Ps: i) Precision which is similar to the Scope element in the 4Ss model; ii) Payment which involves technical issues of how to finish the financial transactions securely and efficiently; iii) Personalization, which refers to providing customized products and services according to customers'

needs; and iv) Push & Pull which refers to finding the balance among active communication policies and users' demand.

4Ps+$P^2C^2S^3$ model

This model contains the traditional 4Ps with the additions of the following elements: i) Personalization, which is similar to the Personalization element in the 8Ps model; ii) Privacy, which refers to the policy used to protect customers' privacy; iii) Community, which involves online social media to facilitate online shopping decisions; iv) Customer service, which consists of all online services provided to customers; v) Site, which involves organization of contents and design layout on the web sites; vi) Security, which considers the security settings to protect the web sites; vii) Sales promotion, which involves online sales promotion activities offered to the customers. For each e-marketing mix element, there are a few corresponding e-marketing tools shown in Table 1. Based on the important levels of the corresponding e-marketing tools, Sam and Chatwin [45] measured each e-marketing mix element and the results provided references for online stores to develop more effective e-marketing plans.

Table 1: E-Marketing Tools of E-Marketing Mix Elements

E-Marketing Mix Elements	**Supporting E-Marketing Tools**
Product	Assortment
	Configuration Engine-configure products
	Planning and Layout Tools
Promotion	Online Advertisements
	Outbound Email
	Viral Marketing
	Recommendation
Place	Affiliates
	Remote Hosting
Price	Dynamic Pricing
	Forward Auctions
	Reverse Auctions
	Name Your Price
Personalization	Customization
	Individualization-send notice of individual preference
	Collaborative Filtering
Privacy	Privacy Policy
Customer Service	FAQ & Help Desk
	Email Response Mgmt.
	Chat Rooms Between Customers and Supporting Staff
	Order Tracking
	Sales Return Policy
Community	Product Discussion Among Customers
	User Ratings & Reviews
	Registries & Wish lists
Site	Home Page
	Navigation & Search
	Page Design & Layout
Security	Security tool (s)
Sales Promotion	E-Coupons

Since this study investigates language learners' behavioral intention towards online language learning based on their perceptions of e-marketing mix elements available on the online language learning web sites, the adopted e-marketing mix model should be based on the language learners' point of view. As a result, the $4Ps+P^2C^2S^3$ model [29] is the most suitable e-marketing mix model to be adopted as the basis of our proposed research model.

RESEARCH MODEL

Product

The product element in the e-marketing mix $4Ps+P^2C^2S^3$ model focuses on assortment, merchandising and customization. Merchandising, quality of products, and product configuration are major determinants of the customer purchase decision [7]. For digital products, the quality of product has a positive influence on a consumer's purchase intention [35]. In addition, the amount, accuracy and the form of information about the products offered on the website are positively associated with consumers online purchase intention [40]. Thus, the following hypothesis is proposed:

H1: Perceived product element has a positive impact on behavioral intention to use online language learning.

Promotion

Promotions are important as they can inform consumers of product availability, generate public awareness of marketing activities and increase customer loyalty [4]. Personal interaction, multimedia features of website and purchase relationship should be included as elements of the P of promotion in the Web environment [16]. Promotions are useful cues for cognitive evaluations of a product and purchasing decision [44]. Another study found that implementing several promotion tools together has significant effect on a consumer's purchase intention [32]. Thus, the following hypothesis is proposed:

H2: Perceived promotion element has a positive impact on behavioral intention to use online language learning.

Place

Search engine marketing is very popular in the e-Advertising space [41]. Furthermore, search engine marketing is an effective and efficient tool to bring online consumers to business websites [27]. As a result, search engine marketing is recommended to generate traffic to websites, build a brand image and reach target customer segments. In this way, it can increase customers' purchase intention. Thus, the following hypothesis is proposed:

H3: Perceived place element has a positive impact on behavioral intention to use online language learning.

Price

The Price element refers to the strategy used to determine the product shown on the business web sites and allow customers to search for their suitable target price range. The tools under this element are 1) price filters that consumers can use to look for suitable products when entering target prices, 2) price variations based on product demand and supply. Kusumawati et al. [32] showed that the price element of digital music products has a positive influence on consumer's purchase intention. Thus, the following hypothesis is proposed:

H4: Perceived price element has a positive impact on behavioral intention to use online language learning.

Personalization

In a traditional business environment, retailers often offer special products or services based on individual customers' needs in order to engage them personally. In the online business environment, personalization is referred to as how websites or web-services tailor individual customer needs [29]. Maru Winnacker, the CEO of Project OONA, strongly believes that mass customization can bring customers and online retailers closer [39]. The personalized information offered in websites enhances their online performance [52]. Thus, the following hypothesis is proposed:

H5: Perceived Personalization element has a positive impact on behavioral intention to use online language learning.

Privacy

Online privacy is the ability to control the information a user provides about his/her personal information, and control the access to the information. Privacy has a positive impact on consumers' behavioral intentions to purchase from a web site or visit a web site again [37]. E-commerce websites have begun to display privacy policies or other relevant statements on their websites. Third party privacy seal programs are created to assure consumers that their personal privacy is respected by e-commerce websites on the Internet. It has been argued that privacy perception has a positive impact on an individual's behavioral intention when purchasing online. Thus, the following hypothesis is proposed:

H6: Perceived privacy element has a positive impact on behavioral intention to use online language learning.

Customer Service

Online businesses should consider building two-way communications to answer consumers' requests via an email management system. Previous studies indicate that the dimension of responsiveness has a moderate effect on overall service quality and customer satisfaction for online stores [31, 54]. In addition, service quality of websites has a positive impact on purchase intentions and online customer satisfaction [34, 1]. Thus, the following hypothesis is proposed:

H7: Perceived customer service element has a positive impact on behavioral intention to use online language learning.

Community

The community of e-marketing mix $4Ps+P^2C^2S^3$ refers to virtual communities like forums and chatrooms used to discuss the products among online users. Furthermore, online word-of-mouth is also an important element in Communities [29, 36]. Previous studies found that eWOM plays an increasingly significant role in consumer purchase decisions [17, 55]. Thus, the following hypothesis is proposed:

H8: Perceived community element has a positive impact on behavioral intention to use online language learning.

Site

The Site element of e-marketing mix $4Ps+P^2C^2S^3$ focuses on website layout design and displays [29]. The use of graphics, colors, photographs, various font types are included in websites to improve the website's visual design. Karvonen [30] found that 'aesthetic beauty' positively impacts consumers' trust of a website. Furthermore, Cyr [12] found that the visual design of the website has a positive impact on trust and consumers' decision to purchase. Thus, the following hypothesis is proposed:

H9: Perceived site element has a positive impact on behavioral intention to use online language learning.

Security

The Security element focuses on the e-marketing tools of securing business web sites. Security is one of the major dimensions of online trust [6]. The improvement in security results in an increase in trust with the online vendor [19]. Previous studies indicated that Chinese consumers in general have a high uncertainty avoidance culture [24, 13] and they are likely to refrain from such technologies, e.g. Internet. The e-marketing tools of securing business web sites are supposed to increase the level of certainty. Thus, the following hypothesis is proposed:

H10: Perceived security element has a negative impact on behavioral intention to use online language learning.

Sales Promotion

Sales promotion can also be referred to as any incentive used by manufacturers or retailers to provoke trade with other retailers [49]. Park and Lennon [43] found that sales promotions (e.g. discounts) tend to positively influence customer estimates of the fair price of a promoted product, to enhance perceived value of the deal, and to increase satisfaction with a purchase and purchase intentions.

H11: Perceived sales promotion has a positive impact on behavioral intention to use online language learning.

Behavioral Intention

According to Davis [14], behavioral intention of using a particular technology has a positive impact on its actual use. Previous studies found that behavioral intentions of using Public Internet Access Point [2], electronic learning systems [3] and Internet banking adoption [38] have a positive impact on their corresponding actual uses. Thus, the following hypothesis is proposed:

H12: Behavioral intention has a positive impact on actual use of online language learning.

The conceptual model is shown in Figure 2.

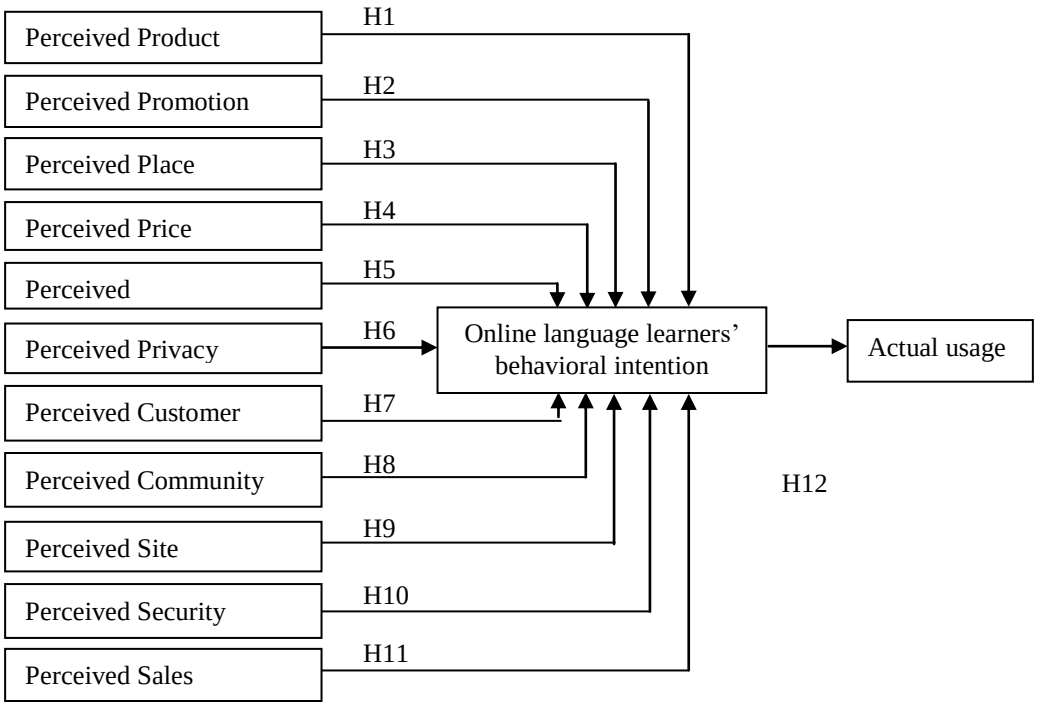

Figure 2: Conceptual Model

RESEARCH METHODS

Research Design and Setting

In order to analyze the language learners' adoption of online language learning, quantitative analysis was performed. In this study, behavioral intention was adopted from Venkatesh et al. [53] and Davis [14]; Use Behavior was taken from Im et al. [25]; while the antecedents of behavioral intention were taken from Kalyanam and McIntyre [29]. There are three e-marketing tools (forward auction, reverse auction and wish-list) omitted from the 4Ps+ $P^2C^2S^3$ model as they are not relevant in the context of online language learning. The remaining e-marketing tools are then combined with the items of behavioral intention and actual usage to form the questionnaire items shown in Table 2.

Data Collection

The questionnaire has two versions: one in English and the other in Chinese. The target respondents are the students who studied language at the Academy of Continuation Education in Beijing Normal University – Hong Kong Baptist University UNITED INTERNATIONAL COLLEGE. The items of e-marketing mix elements were measured using five-point Likert scales, ranging from unimportant (1) to critical (5) while the items of behavioral intention were also measured using five-point Likert scales, ranging from strongly disagree (1) to strongly agree (5). A total of 1000 questionnaire copies were distributed and the response rate was 60.7%. On this basis, 13 responses were invalidated due to missing values while 594 responses were validated. Descriptive statistics related to the sample are presented in Table 3.

Table 2: Questionnaire Items

Perceived Product	
PR1	Different categories of online language courses available
PR2	Detailed features and benefits of online language courses available
PR3	Excellent course quality
Perceived Promotion	
PRM1	Out-bound email like a Newsletter
PRM2	I often find the website's advertisement online, like e-banners, sponsored links…etc.
PRM3	The online language web site contains messages or video clips about some language courses that are so attractive that I will inform others about it.
Perceived Place	
PLA1	Online language learning website can be easily found through a search engine like Baidu.
PLA2	The link of online language websites can be found and accessed from other well-known related websites (Educational Websites).
Perceived Price	
PRC1	I can enter a price range to filter out a suitable course.
PRC2	The price of each online course can be changed dynamically according to the popularity of the course.
Perceived Personalization	
PRS1	When I log on to the online language website, it can show all the courses that I visited before.
PRS2	When I log into the language learning website, it will send notice to me about new courses based on my interests.
PRS3	Based on my interests, online language learning websites will recommend courses or teachers who have received high ratings from other learners.
Perceived Privacy	
PRV1	Messages about privacy such as "We will not sell your personal data…"
PRV2	Privacy policy is strict and the page can easily be found on the website
Perceived Customer Service	
CSR1	Online Consulting/Live Chat
CSR2	FAQ/Help Page
CSR3	Guarantee/Refund Policy
CSR4	Quick response from e-mail enquiry
CSR5	Toll Free Number
Perceived Community	
COM1	Forums or chatroom for language learners to share experience and practice language skills
COM2	Learner reviews and rating system on the online language learning website so that I can view ratings from previous learners.
Perceived Site	
SIT1	The homepage of the online language learning website clearly shows the features, benefits and categories of the courses.
SIT2	The content and layout of the online language learning website is well organized so that the background format is matched with the text style and color.
SIT3	According to my preferred category, such as: business English and oral English, the website will show the related courses.

Table 2: Questionnaire Items (cont.)

Perceived Security	
SEC1	Security techniques that protect customers' personal data such as ID, credit card information from hackers during data transmission in the Internet. For example, security payment signs, or pay with the third party payment tools like Alipay.
SEC2	Security techniques that can only allow for authorized access to customers' data
SEC3	The web sites' servers should always be safe from hackers' attack so that the web sites are always available.
Perceived Sales Promotion	
SPR1	E-Coupon
SPR2	After I subscribe to an e-newsletter, I will receive information about special time limited offers. Ex: 72-Hours Anniversary Sale 50% OFF.
Behavioral intention	
INT1	I will attend the courses held by online language learning website again.
INT2	I will recommend courses held by online language learning websites to my family and friends.
INT3	When I have to apply for courses again, the online language learning website is my first choice.
INT4	I will take the initiative to pay attention to courses held by online language learning website.
Actual Use	
USE1	On average, How much time (number of hours) did you spend on online language learning in the past 30 days?
USE2	How many times did you use online language learning in the past 30 days?

Table 3: Profile of Questionnaire Respondents

Demographics	**Number**	**Percent**
Gender		
Female	417	70.2
Male	177	29.8
Age		
<= 18	25	4.2
19-22	173	29.1
23-26	117	19.7
27-30	84	14.1
31-34	90	15.2
35-38	45	7.6
39-42	32	5.4
>= 43	28	4.7
Income level		
Below 300 USD	180	30.3
300-600 USD	135	22.7
601-900 USD	93	15.7
901-1200 USD	79	13.3
Over 1200 USD	107	18.0

RESULTS

In this study, Structural Equation Modeling (SEM) was used to validate the proposed research model in order to test the hypotheses. Regarding the analysis procedures of the SEM, the AMOS software package was utilized. A two-phased approach to SEM analysis [21] was adopted. A confirmatory factor analysis (CFA) was performed to examine the overall fit, validity, and reliability of the measurement model, followed by examining the hypotheses using the structural model.

Reliability and validity

In order to evaluate the reliability of the measures for the constructs, one of the well-known models was used-- Cronbach's alpha. As shown in Table 4, all Cronbach's alpha values for each construct are above or very close to the expected threshold of 0.7, showing evidence of internal consistency.

Exploratory factor analysis was then conducted to improve the instrument by removing items that did not load on an appropriate high-level construct [15, 50, 42]. A maximum likelihood factor analysis was then conducted. At the beginning, any items with commonality less than 0.3 were removed [20]. Next, the absolute values of rotated factor loading greater than 0.4 were retained only [28]. As a result, 13 factors were extracted and accumulatively accounted for 60.76% of the total variance. Table 4 presents the factor structure of the exploratory factor analysis for the adoption of online language learning based on the E-Marketing Mix model.

The CFA procedure was then conducted to assess the measurement model in terms of goodness-of-fit, convergent validity and discriminant validity. The overall fit of the measurement model was assessed using the following common measures: the ratio of chi-square to the degrees of freedom, CFI, SRMR, GFI and AGFI. The results of the analysis indicated that the goodness-of-fit indices for the hypothesized measurement model were reasonable (Chi-square/d.f. = 2.197, CFI = 0.939, SRMR = 0.044, GFI = 0.902, AGFI = 0.874, RMSEA = 0.045). All the index values met their corresponding acceptance levels [20, 47].

The reliability and convergent validity of the measurement scale was also tested. Results are shown in Table 5. The standardized factor loadings reached a significant level while the composite reliability (CR) values were all higher than 0.6, which showed good reliability on all measures [5, 20]. In addition, the convergent validity was also evaluated and the average variance extracted (AVE) values of all constructs exceeded 0.5 [18]. Overall, the measurement model exhibited adequate reliability and convergent validity.

Finally, to assess discriminant validity, the square root of AVE should be greater than the correlations between the constructs [22]. This is also reported in Table 6 for all constructs. We conclude that all the constructs show evidence of discrimination.

Table 4: Factor Analysis results and Cronbach's Alpha coefficient

	Factor												
Item code	1	2	3	4	5	6	7	8	9	10	11	12	13
PR1	0.66												
PR2	0.38												
PR3	0.66												
PRM1		0.58											
PRM2		0.75											
PRM3		0.41											
PLA1			0.40										
PLA2			0.99										
PRC1				0.63									
PRC2				0.83									
PRS1					0.62								
PRS2					0.95								
PRS3					0.47								
PRV1						1.03							
PRV2						0.47							
CSR1							0.71						
CSR2							0.69						
CSR3							0.40						
CSR4							0.61						
CSR5							0.63						
COM1								0.91					
COM2								0.72					
SIT1									0.61				
SIT2									0.76				
SIT3									0.47				
SEC1										0.79			
SEC2										0.78			
SEC3										0.84			
SPR1											0.51		
SPR2											1.02		
INT1												0.67	
INT2												0.68	
INT3												0.80	
INT4												0.77	
USE1													0.97
USE2													0.99
Cron. Alpha	0.69	0.70	0.71	0.73	0.77	0.80	0.79	0.80	0.76	0.85	0.78	0.83	0.98

Table 5: Convergent validity for the measurement model

Construct	Indicator	Factor Loading	Composite Reliability	AVE
Perceived Product	PR1	0.68	0.70	0.51
	PR2	0.67		
	PR3	0.62		
Perceived Promotion	PRM1	0.67	0.70	0.52
	PRM2	0.63		
	PRM3	0.67		
Perceived Place	PLA1	0.74	0.71	0.55
	PLA2	0.74		
Perceived Price	PRC1	0.71	0.74	0.58
	PRC2	0.81		
Perceived Personalization	PRS1	0.71	0.77	0.53
	PRS2	0.75		
	PRS3	0.72		
Perceived Privacy	PRV1	0.82	0.80	0.66
	PRV2	0.80		
Perceived Customer Service	CSR1	0.64	0.79	0.50
	CSR2	0.67		
	CSR3	0.63		
	CSR4	0.68		
	CSR5	0.63		
Perceived Communication	COM1	0.79	0.80	0.66
	COM2	0.83		
Perceived Site	SIT1	0.74	0.76	0.52
	SIT2	0.69		
	SIT3	0.73		
Perceived Security	SEC1	0.81	0.85	0.66
	SEC2	0.83		
	SEC3	0.80		
Perceived Sales Promotion	SPR1	0.81	0.78	0.64
	SPR2	0.80		
Behavioral Intention	INT1	0.75	0.83	0.55
	INT2	0.72		
	INT3	0.77		
	INT4	0.74		
Use Behavior	USE1	0.97	0.98	0.96
	USE2	0.99		

Table 6: Discriminant validity

	PR	CS	BI	SEC	ACT	PRM	PRS	SPR	COM	PLA	PRC	PRV	SIT
PR	**0.71**												
CS	0.54	**0.71**											
BI	0.60	0.53	**0.74**										
SEC	0.49	0.58	0.38	**0.81**									
ACT	-0.03	-0.01	0.00	-0.10	**0.98**								
PRM	0.62	0.41	0.55	0.10	-0.01	**0.72**							
PRS	0.64	0.62	0.56	0.38	0.03	0.55	**0.73**						
SPR	0.40	0.64	0.56	0.33	0.06	0.48	0.47	**0.80**					
COM	0.55	0.64	0.59	0.45	-0.04	0.43	0.52	0.48	**0.81**				
PLA	0.59	0.56	0.48	0.37	-0.01	0.65	0.62	0.40	0.41	**0.74**			
PRC	0.61	0.63	0.47	0.49	-0.10	0.46	0.62	0.52	0.43	0.53	**0.76**		
PRV	0.51	0.61	0.40	0.74	-0.08	0.21	0.46	0.33	0.42	0.41	0.47	**0.81**	
SIT	0.62	0.70	0.64	0.56	0.05	0.49	0.66	0.52	0.68	0.61	0.53	0.50	**0.72**

Note: 1. Diagonal values represent square roots of the AVE. 2. PR = Perceived Product; CS = Perceived Customer Service; BI = Behavioral Intention; SEC = Perceived Security; ACT = Actual Use; PRM = Perceived Promotion; PRS = Perceived Personalization; SPR = Perceived Sales Promotion; COM = Perceived Community; PLA = Perceived Place; PRC = Perceived Price; PRV = Perceived Privacy; SIT = Perceived Site.

Hypotheses test

Before hypotheses testing, the goodness-of-fit of the structured model was examined by using the same indices that were used for the reliability and validity of the constructs. Since all of the model fit indices indicate the adequacy of the structural model, it is concluded that the model exhibits a good fit [21].

Once the structural model is determined as adequate, the hypotheses are examined [21]. Figure 3 presents the standardized path coefficients (β), their significance for the structural model, and the coefficients of determinant (R2) for each endogenous construct. Results of the hypotheses testing are summarized in Table 7. The results are discussed below:

1. Perceived Product has a significant and positive impact on behavioral intention (β = 0.175, t = 3.335), indicating support for H1.
2. Perceived Privacy has a significant and positive impact on behavioral intention (β = 0.223, t = 4.759), indicating support for H6.
3. Perceived Customer Service has a significant and negative impact on behavioral intention (β = -0.645, t = -9.264), indicating negative support for H7.
4. Perceived Community had a significant and positive impact on behavioral intention (β = 0.221, t = 5.753), indicating support for H8.
5. Perceived Site has a significant and positive impact on behavioral intention (β = 0.603, t = 9.166), indicating support for H9.
6. Perceived Security had a significant and negative impact on behavioral intention (β = -0.110, t = -2.131), indicating support for H10.
7. Perceived Sales Promotion has a significant and positive impact on behavioral intention (β=0.424, t = 11.192), indicating support for H11.

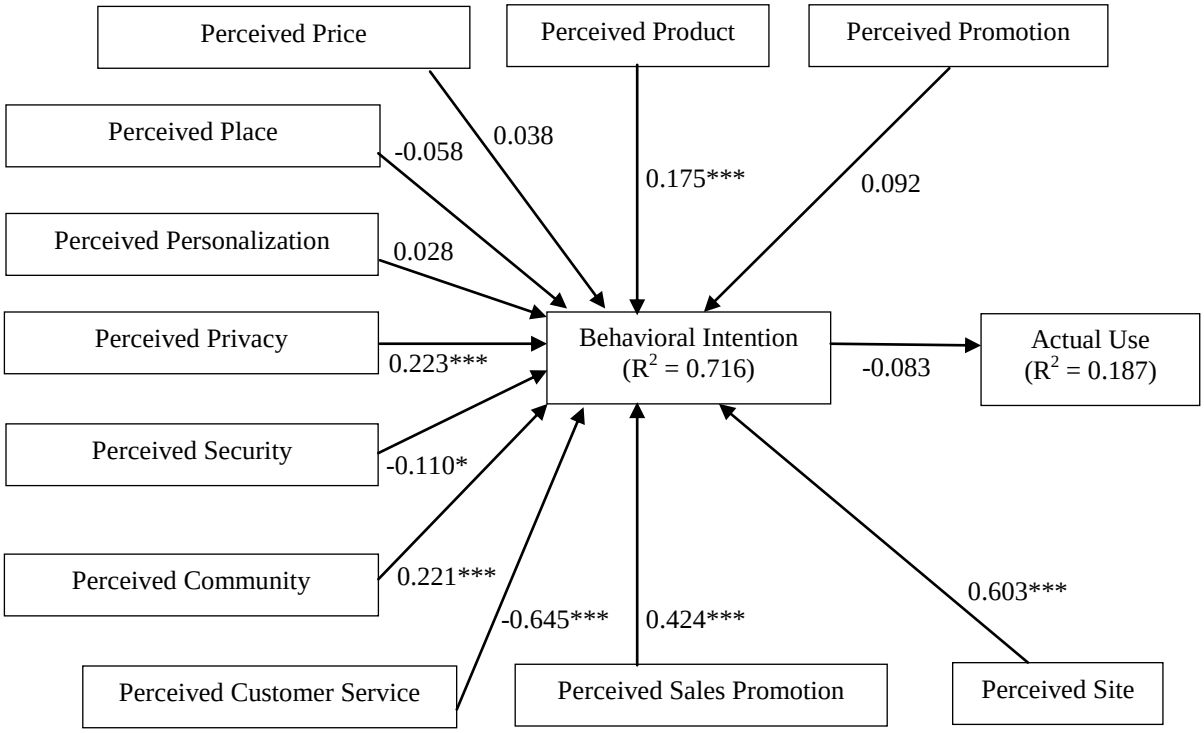

Figure 3: The results of the structured model

Table 7: Results of the structured model and hypothesis tests

Hypothesis	Path Coefficient	t value	Support
H1: PR → BI	0.175	3.335***	Yes
H2: PRM → PI	0.092	1.706	No
H3: PLA → BI	-0.058	-1.237	No
H4: PRC → BI	0.038	0.871	No
H5: PRS → BI	0.028	0.628	No
H6: PRV → BI	0.223	4.759***	Yes
H7: CS → BI	-0.645	-9.264***	Yes (Negative)
H8: COM → BI	0.221	5.753***	Yes
H9: SIT → BI	0.603	9.166***	Yes
H10: SEC → BI	-0.110	-2.131*	Yes
H11: SPR → BI	0.424	11.192***	Yes
H12: BI → USE	-0.083	-1.953	No

Note: $***\ p < 0.001$; $**\ p < 0.01$; $*\ p < 0.05$.

CONCLUSION

This study is the first known attempt to find out the relationship between e-marketing mix model and behavioral intention of adopting online technologies from consumers' perspectives. According to the results shown in the previous section, perceived product has significant positive impact on behavioral intention to adopt online language learning. The online course quality and the varieties of online language courses available are critical factors when deciding to adopt online language learning.

In addition, perceived privacy has a significant positive impact on behavioral intention of learning language online. It indicates that privacy control plays a role in adopting online language learning. Furthermore, perceived community also plays a positive role in adopting online language learning, indicating that learning an online language course involves interactions with other online classmates.

Among all the e-marketing mix elements, site and sales promotion are the two most important elements as perceived site and perceived sales promotion have a significantly high positive impact on behavioral intention to adopt online language learning. The online language learners are very sensitive to special sales offers or e-coupons for online courses and the overall design of online language learning web sites.

Regarding security and customer service, the results indicated that perceived security and perceived customer service have a significantly negative impact on behavioral intention to adopt online language learning. The more important the security of online language learning web sites is perceived by language learners, the higher the security standard they require the online language learning web sites to have. However, the language learners think that the current online language learning platforms do not provide their expected security standards. Hence, they have a lower intention to adopt online language learning. For customer service, which has the highest negative impact on behavioral intention, the language learners believe that customer service is really not good enough on the current online language learning platforms. They will have higher intention to adopt it only if they perceive customer service as less important.

Based on the results, it may follow that there is no significant relation between intention to use online language learning platform and actual behavior. This result, however, was mainly based on self-reported system usage rather than direct observations. It is our belief that efforts should be made in order to clearly distinguish the nature of this relationship and to develop consistent measures for subjective and objective reports of system usage in scholarly research.

For theoretical implication, this study is the first to evaluate the impact of perceived e-marketing mix elements on behavioral intention of online language learning. The most important managerial implication of this study is that it provides a comprehensive set of e-marketing mix elements that contribute to the behavioral intention of adopting online language learning. It provides a statistically based reference for online language learning website managers to find out which e-marketing mix elements and e-marketing tools they should focus on to bring higher profits rather than trying to obtain higher profits through direct price competition. For practical implication, the web site designers can develop a more suitable online language learning platform for online language learners.

For future enhancement, these results can be compared with those of other fields in online education in order to gain insight into the common e-marketing mix elements that have positive impact on different fields in online education. In addition, the research model will be further extended to include other relevant factors about online language learning to perform thorough evaluation on the adoption of online language learning platform.

REFERENCES

[1] Abbaspour, B. and Hazarinahashim, N., "The Influence of Website Quality Dimensions on Customer Satisfaction in Travel Website," *International Journal of Science Commerce and Humanities*, Vol. 3, No. 5, 2015, pp.6-17.

[2] Afacan, G., Er, E. and Arifoglu, A., "Public Internet access points (PIAPs) and their social impact: a case study from Turkey," *Behavior & Information Technology*, Vol. 32, No. 1, 2013, pp.14-23.

[3] Ángel, F. Agudo-Peregrina, Ángel, Hernández-García and Félix, J. Pascual-Migue, "Behavioral intention, use behavior and the acceptance of electronic learning systems: Differences between higher education and lifelong learning," *Computers in Human Behavior*, Vol. 34, 2014, pp.301-314.

[4] Bagozzi, R.P., Marketing Management, NJ, Upper Saddle River: Prentice Hall, 1998.

[5] Bagozzi, R. P. and Yi, Y., "On the evaluation of structural equation models," *Journal of the Academy of Marketing Science*, Vol. 16, No. 1, 1988, pp.74–94.

[6] Camp, L. J., Trust and risk in Internet Commerce. Cambridge, M.A.: MIT Press, 2001.

[7] Chen, Y. H., Hsu, I. C. and Lin, C. C., "Website attributes that increase consumer purchase intention: A conjoint analysis," *Journal of Business Research*, Vol. 63, 2010, pp.1007-1014.

[8] China Education Facility, "Online Education: VIPABC Received 1 Billion Investment", http://www.cnjyzb.net/news/detail-20140217-13250.html, February 2014.

[9] China Webmaster, "Barriers of Online Education: How to generate traffic?" http://www.chinaz.com/start/2014/0411/347171_2.shtml, April 2014.

[10] ChinaDaily.com, "How large is the market share of online language learning in online learning?"

http://www.chinadaily.com.cn/hqcj/xfly/2015-03-12/content_13355319.html, March 2015.

[11] Constantinides, E., "The 4S web-marketing mix model," *Electronic Commerce Research and Applications*, Vol. 1, No. 1, 2002, pp.57-76.

[12] Cyr, D., "Modeling Website Design across Cultures: Relationships to Trust, Satisfaction and E-loyalty," *Journal of Management Information Systems*, Vol. 24, No. 4, 2008, pp.47-72.

[13] Dai, H. and Palvia, P., "Factors affecting mobile commerce adoption: a cross-cultural study in China and the United States," *The DATA BASE for Advances in Information Systems*. Vol. 40, No. 4, 209, pp.43-61.

[14] Davis, F. D., "Perceived usefulness, perceived ease of use and use acceptance of information technology," *MIS Quarterly*, Vol. 13, No. 3, 1989, pp.319–339.

[15] Doll, W. J. & Torkzadeh, G., "The measurement of end-user computing satisfaction," *MIS Quarterly*, Vol. 12, No. 2, 1988, pp.259–274.

[16] Dominici, G., "From Marketing Mix to E-Marketing Mix: a Literature Overview and Classification," *International Journal of Business and Management*, Vol. 4, No. 9, 2009, pp.17-24.

[17] Duan, W., Gu, B. and Whinston, A. B., "The Dynamics of Online Word-of-Mouth and Product Sales - An Empirical Investigation of the Movie Industry," *Journal of Retailing*, Vol. 84, No. 2, 2008, pp.233–242.

[18] Fornell, C. and Larcker, D. F., "Evaluating structural equation models with unobservable variables and measurement error," *Journal of Marketing Research*, Vol. 18, No. 1, 1981, pp.39–50.

[19] Ganguly, B., Bhusan Dash, S. and Cyr, D., "Website characteristics, Trust and purchase intention in online stores: - An Empirical study in the Indian context," *Journal of Information Science and Technology*, Vol. 6, No. 2, 2009, pp.22-44.

[20] Hair, J. F., Black W. C., Babin, B. J., Anderson, R. E. and Tatham, R. L., Multivariate Data Analysis (5th ed.), MA, Boston: Pearson Education Inc., 1998.

[21] Hair, J. F., Black W. C., Babin, B. J., Anderson, R. E. and Tatham, R. L., Multivariate Data Analysis (6th ed.), NJ, Upper Saddle River: Pearson Education Inc., 2006.

[22] Henseler, J., Ringleand, C. M. and Sinkovics, R. R., "The use of Partial Least Squares path modelling in International Marketing," *New Challenges to International Marketing*, Vol. 20, 2009, pp.277–319.

[23] Hoffman, D. L. and Novak, T. P., "A New Marketing Paradigm for Electronic Commerce," *The Information Society*, Vol. 13, No. 1, 1997, pp.43-54.

[24] Hsee, C. K. and Weber, E. U., "Cross-national differences in risk preference and lay predictions," *Journal of Behavioral Decision Making*, Vol. 12, No. 2, 1999, pp.165-179.

[25] Im, I., Hong, S. and Kang, M. S., "An international comparison of technology adoption: Testing the UTAUT model," *Information & Management*, Vol. 48, No. 1, 2011, pp.1–8.

[26] iResearch, China Online Education Development Report, 2014.

[27] Jansen, B. J. and Spink, A., "Investigating Customer click Through behavior with integrated sponsored & non sponsored results," *International Journal of Internet Marketing & Advertising*, Vol. 5, No. 1/2, 2009, pp.74-94.

[28] Joreskog, K.G. and D. Sorbom, LISREL 6: Analysis of linear structural relationships by the method of maximum likelihood (3rd ed), IL, Chicago: Scientific Software International Inc., 1984.

[29] Kalyanam, K. and McIntyre, S., "The marketing mix: A contribution of the e-tailing wars," *Journal of the Academy of Marketing Science*, Vol. 30, No. 4, 2002, pp.483-495.

[30] Karvonen, K., "The beauty of simplicity," *ACM Proceedings on the Conference on Universal Usability*, Washington, D. C., USA, November 2000, pp.85-90.

[31] Kuo, Y. F., "A study on service quality of virtual community web sites," *Total Quality Management*, Vol. 14, No. 4, 2003, pp.461-473.

[32] Kusumawati, R. D., Oswari, T., Utomo, R. B. and Kumar, V., "The Influence of 7P's of Marketing Mix on Buying Intention of Music Product in Indonesia," *Procedia Engineering*, Vol. 97, 2014, pp.1765-1771.

[33] Lauterborn, B., "New marketing litany: Four P's Passe: C-words take over," *Advertising Age*, Vol. 61, No. 41, 1990, pp.26.

[34] Lee, G. G. and Lin, H. F., "Customer perceptions of e-service quality in online shopping," *International Journal of Retail & Distribution Management*, Vol.33, No. 2, 2005, pp.161-176.

[35] Lee, H. C., Tsai, D. C. and Wu, M. D., "The dilemma of mixed bundles: The effects of price, brand, and content preference on music CD bundle choices," *Journal of Retailing and Consumer Services*, Vol.18, No. 5, 2011, pp.455-462.

[36] Lee, J., Park, D. H. and Han, I., "The Effect of Negative Online Consumer Reviews on Product Attitude: an Information Processing View," *Electronic Commerce Research and Applications*, Vol. 7, No. 3, 2008, pp.341–352.

[37] Liu, C., Marchewka J. T., Lu, J. and Yu, C. S., "Beyond Concern – a privacy-trust-behavioral intention model of electronic commerce," *Information & Management*, Vol. 42, No. 2, 2005, pp.289-304.

[38] Martins, C., Oliveira T. and Popovič, A., "Understanding the Internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application," *International Journal of Information Management*, Vol. 34, No. 1, 2014, pp.1-13.

[39] Mass Customization & Open Innovation News, "Interview with German handbag customizer Project OONA", http://mass-customization.blogs.com/mass_customization_open_i/2012/12/market-watch-project-oona-a-womans-paradise-part-ii.html, December 2012.

[40] Mohd Sam, Mohd Fazli and Tahir, Md Nor Hayati, "Website Quality and Consumer Online Purchase Intention of Air Ticket," *International Journal of Basic & Applied Sciences*, Vol. 9, No. 10, 2009, 20-25.

[41] Mushtaq, H., I. Sadiq, I. and Ali, S. N., "Internet Markets & e-Advertising Active Models in Pakistan: Signifying e-Advertising Artifacts Apposite For e-Business Startups," *Proceedings of 2nd International Conference on Business Management*, Lahore, Punjab, Pakistan, March 2012, pp.1-15.

[42] Palvia, P. C., "A model and instrument for measuring small business user satisfaction with information technology," *Information & Management*, Vol. 31, No. 3, 1996, pp.151–163.

[43] Park, M. J. and Lennon, S. J., "Brand name and promotion in online shopping contexts," *Journal of Fashion Marketing and Management*, Vol. 13, No. 2, 2009, pp.149-160.

[44] Raghubir, P., "Free gift with purchase: promoting or discounting the brand?," *Journal of Consumer Psychology*, Vol. 14, No. 1/2, 2004, pp.181-196.

[45] Sam K. M. and Chatwin, C. R., "Measuring E-Marketing Mix Elements for Online Business," *International Journal of E-Entrepreneurship and Innovation*, Vol. 3, No. 3, 2012, pp.13–26.

[46] Science China, "VIPABC is awarded for Most Growth Potential Online Education Brand", http://science.china.com.cn/2014-12/23/content_34387976.htm, December 2014.

[47] Seyal, A. H., Rahman, M. N. and Rahim, M. M., "Determinants of academic use of the Internet: a structural equation model," *Behavior & Information Technology*, Vol. 21, No. 1, 2002, pp.71–86.

[48] Sina & Nielson, China Online Education Market Report, 2014.

[49] Strahilevitz, M. A. and Myers, J. G., "Donations to charity as purchase incentives: how well they work may depend on what you are trying to sell," *Journal of Consumer Research*, Vol. 24, No. 4, 1998, pp.434-446, 1998.

[50] Straub, D. W., "Validating instruments in MIS research," *MIS Quarterly*, Vol. 13, No. 2, 1989, pp.147–169.

[51] Tencent Tech, "51 Talk Received 55 Million USD Investment", http://tech.qq.com/a/20141023/027978.htm, October 2014.

[52] Thongpapanl, N. and Rehman Ashraf, A., "Enhancing Online Performance through Website Content and Personalization," *Journal of Computer Information Systems*, Vol. 52, No. 1, 2011, pp.3-13.

[53] Venkatesh, V., Morris, M. G., Davis, G. B. and Davis, F. D., "User Acceptance of Information Technology: Toward a unified view," *MIS Quarterly*, Vol. 27, No. 3, 2003, pp.425-478.

[54] Wolfinbarger, M. and Gilly, M. G., "eTailQ: dimensionalizing, measuring and predicting etail quality," *Journal of Retailing*, Vol. 79, No. 3, 2003, pp.183-198.

[55] Yayli, A. and Bayram, M., "eWOM: The effects of online consumer reviews on purchasing decision of electronic goods," *Journal of Internet Marketing and Advertising*, Vol. 7, No. 1, 2012, pp.51-64.

[56] Zhejiang Online, "Yang Hua Lian Pian Offer Huge Discount. Price Competition?" http://edu.zjol.com.cn/05edu/system/2014/02/24/002449796.shtml, February 2014.

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