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

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, Marketing Mix, Online Language Learning, Online Education

1. Introduction

Online education in China has become a popular market with an estimated 83.97 billion RMB market in 2013 and with a predicted growth to 173.39 billion RMB by 2017 (iResearch, 2014). 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 (Sina & Nielson, 2014). The market value of online language learning in China reached 19.38 billion RMB in 2014, a 23.7% increase and it is predicted to reach 35.46 billion RMB in 2017 (ChinaDaily.com, 2015).

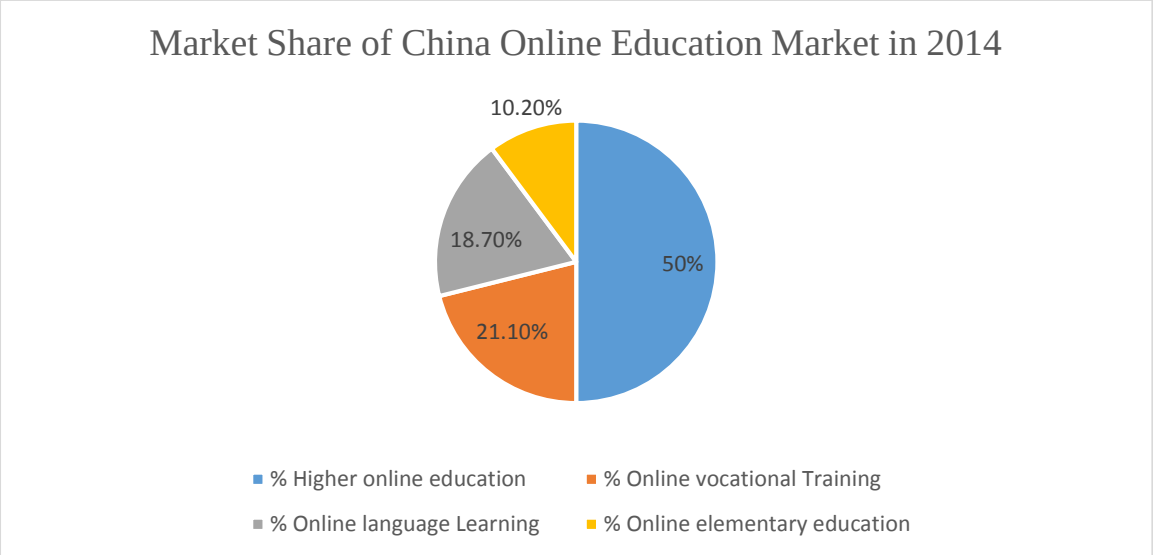

Fig. 1. Market Share of China Online Education Market in 2014 (Sina & Nielson, 2014)

A large amount of venture capital has been invested in online language learning (Tencent Tech, 2014; Science China, 2014). 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 2 online language learning companies were 4 million RMB and 20 million RMB respectively (China Education Facility, 2014). 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 (China Webmaster, 2014) and the low charges for the courses (Zhejiang Online, 2014). 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.

2. Theoretical background and research hypotheses

2.1. E-Marketing Mix Models

From the marketing perspective, price is one of the fundamental elements of the marketing mix model. In order to avoid a price war, companies should pay attention to other marketing elements rather than price. Traditional marketing mix models neglected new elements in the e-commerce environment. Hoffman and Novak (1997) advocated 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 (Lauterborn, 1990), 4Ss model (Constantinides, 2002), 8P model (Dominici, 2009), and 4Ps+$P^2C^2S^3$ model (Kalyanam & McIntyre, 2002).

2.1.1. 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.

2.1.2. 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.

2.1.3. 8Ps model

The 8Ps model includes the 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.

2.1.4. 4Ps+$P^2C^2S^3$ Model

This model contains the basic 4Ps adopted from 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 (2012) 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.

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 (Kalyanam & McIntyre, 2002) is the most suitable e-marketing mix model for this study.

2.2. Hypotheses

2.2.1. Product

The product element in the e-marketing mix $4Ps+P^2C^2S^3$ model focuses on assortment, merchandising and recommendations. Merchandising, quality of products, and product customization are major determinants of the customer purchase decision (Chen, Hsu & Lin, 2010). The quality of product has a positive influence on a consumer's purchase intention to digital products (Lee, Tsai & Wu, 2011). The amount, accuracy and the form of information about the products offered on the website are positively associated with consumers online purchase intention (Mohd Sam & Tahir, 2009). Thus, the following hypothesis is proposed:

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

2.2.2. Promotion

Promotions are important as they can inform consumers of product availability, generate public awareness of marketing activities and increase customer loyalty (Bagozzi, 1998). Personal interaction, multimedia features of website and purchase relationship should be included as elements of the P of promotion in the Web environment (Dominici, 2009). Promotions are useful cues for cognitive evaluations of a product and purchasing decision (Raghubir, 2004). Another study found that implementing several promotion tools together has significant effect on a consumer's purchase intention (Kusumawati et al., 2014). Thus, the following hypothesis is proposed:

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

2.2.3. Place

Search engine marketing is very popular in the e-Advertising space (Mushtaq, Sadiq & Ali, 2009). Furthermore, search engine marketing is an effective and efficient tool to bring online consumers to business websites (Jansen & Spink, 2009). 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.

2.2.4. Price

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. Reni Diah Kusumawati (2014) 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.

2.2.5. Personalization

In a traditional business environment, retailers often offer special products or services based on individual customers' needs or favors 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 (Kalyanam & McIntyre, 2002). Maru Winnacker, the CEO of Project OONA, strongly believes that mass customization can bring customers and online retailers closer (Mass Customization & Open Innovation News, 2012). The personalized information offered in websites enhances their online performance (Thongpapanl & Rehman Ashraf, 2011). Thus, the following hypothesis is proposed:

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

2.2.6. 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 or visit a site again (Liu et al., 2005). 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.

2.2.7. 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 (Kuo, 2003; Wolfinbarger & Gilly, 2003). In addition, service quality of websites has a positive impact on purchase intentions and online customer satisfaction (Lee and Lin, 2005; Abbaspour & Hazarinahashim, 2015). Thus, the following hypothesis is proposed:

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

2.2.8. 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 (Kalyanam & McIntyre, 2002; Lee, Park & Han, 2008). Previous studies found that eWOM plays an increasingly significant role in consumer purchase decisions (Duan, Gu & Whinston, 2008; Yayli & Bayram, 2012). Thus, the following hypothesis is proposed:

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

2.2.9. Site

The Site element of e-marketing mix 4Ps+$P^2C^2S^3$ focuses on website layout design and displays (Kalyanam & McIntyre, 2002). The use of graphics, colors, photographs, various font types are included in websites to improve the website's visual design. Karvonen (2000) found that 'aesthetic beauty' positively impacts consumers' trust of a website. Furthermore, Cyr (2008) 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.

2.2.10. Security

Security is one of the major dimensions of online trust (Camp, 2001). The improvement in security results in an increase in trust with the online vendor (Ganguly, Bhusan Dash & Cyr, 2009). Hsee and Weber (1999) stated that the Chinese are in general, unwilling to take a risk. It was supported by Dai and Palvia (2009) who stated that Chinese consumers in general have a high uncertainty avoidance culture. Thus, the following hypothesis is proposed:

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

2.2.11. Sales promotion

Sales promotion can also be referred to as any incentive used by manufacturers or retailers to provoke trade with other retailers (Strahilevitz & Myers, 1998). Park and Lennon (2009) 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 element has a positive impact on behavioral intention to use online language learning.

2.2.12. Behavioral Intention

According to Davis (1989), 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 (Afacan, Er & Arifoglu, 2013), electronic learning systems (Ángel, Ángel & Félix, 2014)

and Internet banking adoption (Martins, Oliveira & Popovič, 2014) 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.

Hence, the conceptual model is shown in Figure 2.

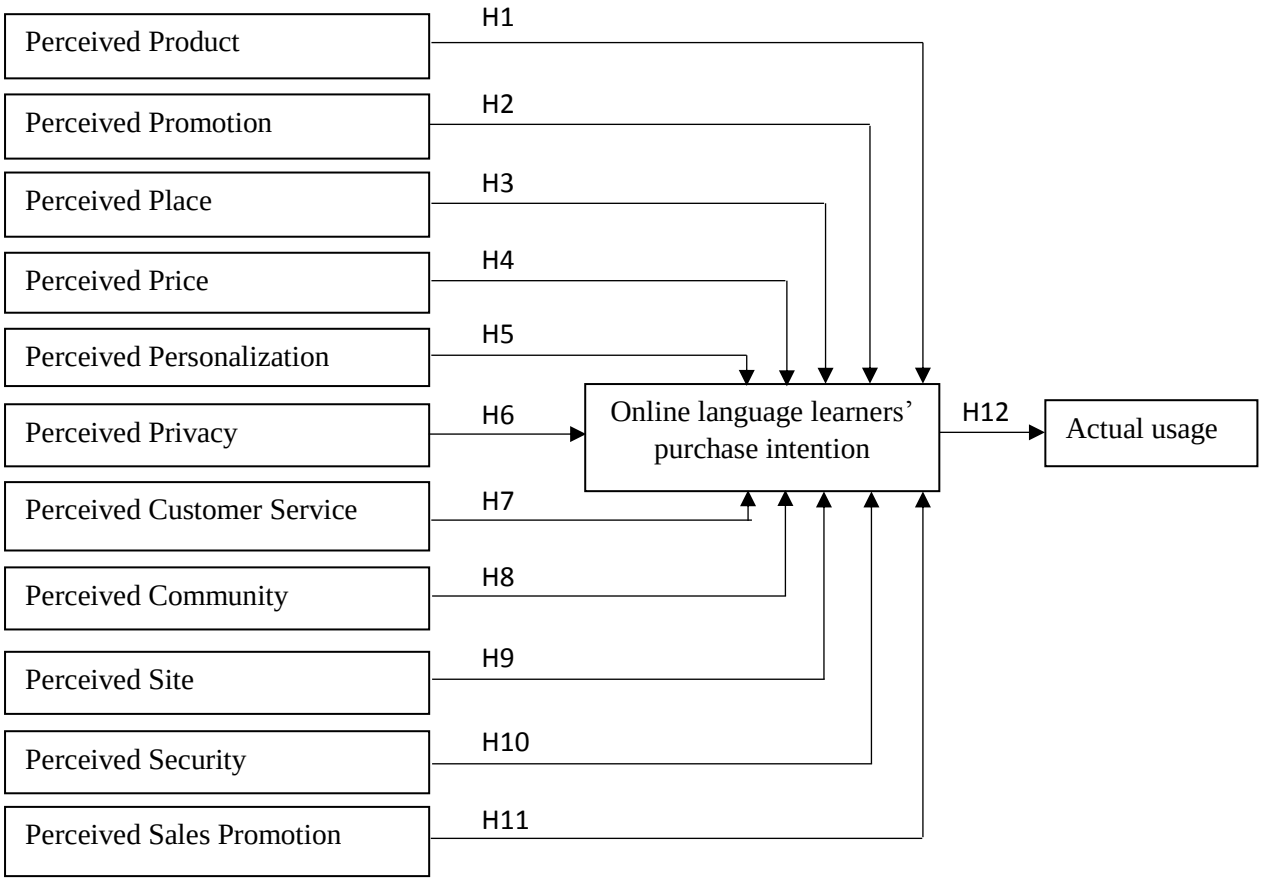

Fig. 2. Conceptual Model

3. Research Methodology

3.1. 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. (2003) and Davis (1989); Use Behavior was taken from Im et al. (2011); while the antecedents of behavioral intention were taken from Kalyanam and McIntyre (2002). First of all, 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 online language learning context. They are then combined with the items of behavioral intention and actual usage to form the questionnaire items shown in Table 2.

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.
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 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?

3.2. Data Collection

The questionnaire has two versions: one in English and the other in Chinese. The target samples of the Questionnaire are the language learners. In order to get random respondents, a simple random sampling method was used in the sampling process. All items except actual use were measured using five-point Likert scales, ranging from unimportant (1) to critical (5). A total of 1000 questionnaire copies were distributed and the response rate was 60.7%. On this basis, 13 reponses were invalidated while 594 responses were validated. Descriptive statistics related to the sample are presented in Table 3.

Table 3. Profile of Questionaire 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 2000 RMB	180	30.3
2000-4000 RMB	135	22.7
4001-6000 RMB	93	15.7
6001-8000 RMB	79	13.3
Over 8000 RMB	107	18.0

4. Results

In this study, Structural Equation Modeling (SEM) was used to validate the proposed research model in order to test the hypotheses. Regarding to the analysis procedures of the SEM, the AMOS software package was utilized. A two-phased approach to SEM analysis (Hair et al., 2006) was adopted. First, a confirmatory factor analysis (CFA) was performed to examine the overall fit, validity, and reliability of the measurement model. The hypotheses were then examined using the structural model.

4.1. Reliability and validity

Firstly, 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 (Doll & Torkzadeh, 1988; Straub, 1989; Palvia, 1996). A maximum likelihood factor analysis was then conducted. At the beginning, any items with commonality less than 0.3 were removed (Hair et al., 1998). Next, the absolute values of rotated factor loading greater than 0.4 were retained only (Joreskog & Sorbom, 1984). 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.

Table 4. Factor analysis results and Cronbach's alpha coefficient.

Item code	Factor												
	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

Secondly, the CFA procedure was 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 ($\chi 2$ /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 (Hair et al., 1998; Seyal et al., 2002).

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 (Bagozzi & Yi, 1998; Hair et al., 1998). In addition, the convergent validity was also evaluated and the average variance extracted (AVE) values of all constructs exceeded 0.5 (Fornell & Larcker, 1981). Overall, the measurement model exhibited adequate reliability and convergent validity.

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		

Finally, to grant discriminant validity, the square root of AVE should be greater than the correlations between the construct (Henseler et al., 2009). This is also reported in Table 6 for all constructs. We conclude that all the constructs show evidence of discrimination.

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.

4.2. Hypotheses test

4.2.1. Structured paths

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 (Hair et al., 2006).

Once the structural model is determined as adequate, the hypotheses are examined (Hair et al., 2006). Figure 3 presents the standardized path coefficients ($\wp$), 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.

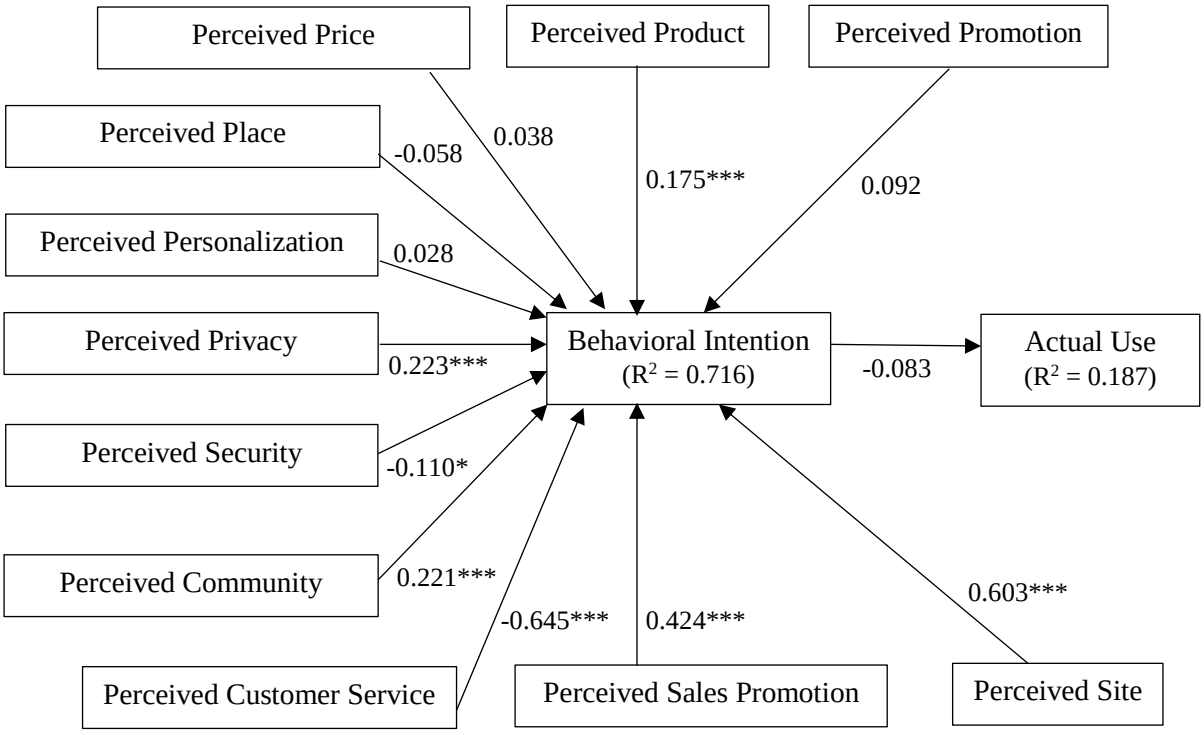

Fig. 3. The results of the structured model.

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. $***$ $p < 0.001$; $**$ $p < 0.01$; $*$ $p < 0.05$.

5. Conclusions

This study is one of the first studies to test online language learning users behavioral intention based on the e-marketing mix model. 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.

With regard to perceived security and perceived customer service, the results show that they 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 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 a system 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.

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 further enhancement, moderation analysis can be conducted to find out the factors that can affect the relationship between e-marketing mix elements and behavioral intention of adopting online language learning. In addition, mediating factors can also be evaluated to make it a more advanced model.

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