

FACTORS AFFECTING THE WILLINGNESS OF CHINESE USERS TO CONTINUE USING ONLINE EDUCATION PLATFORMS IN YUNNAN

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Abstract: This research examines the main factors such as platform system quality, course quality, and user interaction influencing users' continuous use intention on the online education platform from the user experience and perceived value perspective. Data was collected through the convenience approach via online survey questionnaires from 422 Yunnan respondents who had a prior online learning experience, including both elementary and higher education level courses, within the past year on an online education platform in China. Yunnan is located at the border of southwest China, where education is costly and inefficient. Data are tested against the research model by using structural equation modeling. The results indicate that user-perceived value will significantly impact users' willingness to continue using online education platforms. Furthermore, users' functional experience and emotional experience have a positive impact on perceived profit, while they have a negative effect on perceived loss. In addition, the quality of the platform system affects users' functional experience and emotional experiences. Besides, course quality, including timeliness, pertinence, authority, and

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richness, positively affects users' functional experience and emotional experiences. And Interactions between students and teachers were also found in the study that has a positive influence on users' functional experience and emotional experiences.

Keywords: continuous use intention, China, online education platform, perceived value, use experience

Introduction

As a new learning mode, online education gives full play to the advantages of wide network spread and rapid information update, realizes the sharing of learning resources, and meets the learning needs of learners anytime and anywhere. Online education itself is not a new concept. The possibility of computer-assisted learning was first proposed in 1961 by American inventor Dr. Douglas. In 1969, the first Open University was established to realize the distance learning program in the UK, which is also the origin of MOOCs. In recent years, top universities in the United States have successively set up online learning platforms. The rise of three MOOC platforms, Coursera, Udacity, and edX, has provided more students with the opportunity to study online. In China, the Ministry of Education strongly supported distance education and multimedia teaching before 2000. Still, the development of online education was slow due to poor network facilities and high production costs. From 2000 to 2010, with the deepening of informatization, higher education became the main driving force for the growth of online education. Still, the poor content in online schools was challenging to attract many users. Since 2010, online education has been booming with the development of diversified education forms and channels. The market size and the number of users have shown steady growth, and the market segments such as occupation and language have developed particularly rapidly. Many internet and traditional education companies are involved in online education, and online education platforms are fast developing. According to the 46th Statistical Report on China's Internet Development released by CNNIC (2020), the number of Chinese Internet users reached 940 million by June 2020, among which the number of online education users reached 381 million, accounting for 40.5% of the total number of Internet users. As the number of users grows,

so does the size of the online education market.

Based on the difference in educational content, the online education platform could be divided into K12 education (primary and secondary education), vocational training, language training, interest education, college education, early childhood education, and other fields. Domestic giants are competing to launch their platforming online education products, such as Baidu Classroom, Tencent Classroom, Taobao Education, Netease Cloud Classroom, etc. Because each education platform cooperates with content producers, their courses are also different. For example, vocational education in Baidu Classroom and Netease cloud classroom is quite popular, while various language training offered by Huijiang Online School is widely praised.

The Chinese overall higher education online courses and programs are continuously expanding (Chou & Lu, 2013). However, the Chinese southwest region's online education was still in its initial stages, lacking research and reports regarding regional online education development (Tian & Zheng, 2017). Yunnan is located on the southwest border of China, one of the provinces with the longest border line in China. As a frontier province, education problems are high cost and low efficiency (Tian & Zheng, 2017). Due to the economic and social situation, the quality of basic education in Yunnan is poor; online education will be the best choice for Yunnan users to enhance the quality and level of education and eliminate information island. However, in the face of a wide variety of online education platforms, how to choose a satisfactory platform for Yunnan online education platform users, both for elementary education level and higher education level, has become an essential issue.

Additionally, some other consequent issues also need to be considered and studied. For example, when choosing a platform, what factors affect Yunnan users' willingness to use it? What factors affect the Yunnan user's learning experience in the learning process? Are Yunnan users willing to continue using the platform after completing a course? What factors affect their willingness to continue to use? Etc.

Research Objectives

This research has three objectives: 1) To study what experiences Yunnan users have that influence their willingness to continue using online education platforms; 2) To study what specific factors affect the Yunnan users' experience of online education platforms and 3) To investigate what improvement measures should be taken by online education platforms and course content providers to optimize products and content, improving Yunnan users experience and their continuous use intention on the online education platform.

Literature Review and Hypothesis Development Perceived Value

The idea of perceived value can be traced back to 1954. Drucker (1954) believed that what customers buy and consume is not the product but the value. Zeithaml (1988) proposed in an exploratory study from the perspective of customer psychology that perceived value refers to the perception of customers to compare their benefits and costs in market transactions and the overall evaluation of products. After that, the concept of perceived value could be roughly divided into three categories: gain and loss, multi-factor, and comprehensive evaluation. The gain and loss category basically agrees that the core of perceived value is the trade-off between perceived gain and perceived loss. According to the multi-factor category, perceived value is affected by many factors. Sheth, Newman, and Gross (1991) constructed five dimensions of perceived value: functional value, conditional value, social value, affective value, and cognitive value. For the comprehensive evaluation category, perceived value refers to customers' perceived preference and evaluation of product attributes, actual effects of attributes, and usage results that help (or hinder) realize their goals under specific usage scenarios. This study chooses the category of gain and loss and holds that perceived value mainly consists of perceived gain and perceived loss. Perceived gain mainly includes economic factors such as product performance and reliability and non-economic factors such as technical support, brand, and service attached to the product. Perceived loss mainly includes all costs paid by customers at the time of purchase, such as purchase price, acquisition cost, use cost, and possible maintenance cost (Woodruff, 1997). Applied in online education, perceived value refers to the perceived value gained and lost in the use of an online

education platform; users could get learning achievement and service experience, such as cognitive gains.

Meanwhile, users also have perceived losses in terms of time and learning costs. The perceived benefit and loss will vary greatly due to different user experiences, affecting users' willingness to continue using. Hence, this research will study the impact of perceived value on continuous use intention from two perspectives: perceived gain and perceived loss.

Relationship between Perceived Value and Continuous Use Intention

The intention of continuous use refers to the willingness of users to continue using the platform for a long period of time after the initial adoption. The intention of continuous use in this study specifically includes the intention of users to continue learning a course on the platform and to continue learning on the platform after the end of the course. Zeithaml (1988) believes that perceived value refers to the perception that customers compare the benefits they get and the costs they pay in market transactions. It is the overall evaluation of products. Kim, Chan, and Gupta (2007) and Jiang (2015) found that perceived benefits positively impact users' acceptance willingness in the field of mobile internet and online learning. Parasuraman (1997) stated that perceived benefits significantly impacted customers' repeat purchase intention in e-commerce. In the study of perceived loss, Luarn and Lin (2005), Kuo, Wu, and Deng (2009), and Zhou, Lu, and Zhang (2009) respectively mentioned that perceived loss would negatively affect users' acceptance willingness in mobile banking, 3G mobile phone value-added services and mobile commerce applications. When using online education platforms, users will learn knowledge but also pay the cost of time and learning.

Relationship between User Experience and Perceived Value

User experience extends the concept of experience to the field of human-computer interaction. Hassenzahl and Tractinsky (2006) define user experience as the presentation of users' inner state (demand, motivation, expectation, mood, etc.) when interacting with a system with certain characteristics (functionality, purpose, usability, complexity, etc.). In this study, user experience specifically refers to all the experiences gained by users

in the process of interacting with the online education platform. Pine and Gilmore (2002) divided experience into the entertainment experience, education experience, escape from reality, experience, and aesthetic experience, based on people's participation degree (active and passive) and the type of contact (drain, dip). Schmitt (2004) divided experience into five categories, including sensory experience, emotional experience, thinking experience, action experience, and related experience, from the perspective of sociology, psychology, philosophy, and other disciplines. Li and Fan (2006) believe that experience includes three categories: functional experience, emotional experience, and social experience. Based on previous studies, the user experience in this study is divided into three categories: functional experience, emotional experience, and social experience. At present, Internet products are all over our life, and user experience is what users consider most when they are faced with product choice. Good products will bring users a good user experience after the user's use could also obtain a high perceived value; however, a product with a poor user experience will cost users more time and learning costs. Holbrook (1996) found that all user-perceived value is created by user experience. Kerin, Jain, and Howard (1992) and Du and Fan (2007) respectively pointed out that users' emotional experience, social experience, sensory experience, and cognitive experience would positively impact users' perceived value in the retail and tourism industries.

Functional Experience

For Internet products, the primary issue is how to provide core functions and whether they can meet the functional needs of users in specific scenarios. Cadotte and Turgeon (1988) studied how a lack of functionality in Internet products could lead to customer dissatisfaction and complaints. Nie (2013) found that the functional experience in the consumption experience significantly impacts the perceived value of the festival consumption. Online education platforms provide users with various forms of teaching, such as online video and live broadcast, as well as functions such as note-taking and course material transmission.

Emotional Experience

When using Internet products, users will have certain emotional reactions to

the functions, services, or contents they use. Nowadays, product functions tend to be homogenized, and emotional experience has become an essential influencing factor for users' choices. Lei (2015) and Tu and Chen (2015) identified that emotional experience significantly impacted perceived value when they studied user behaviors of IPTV products and non-transaction virtual communities.

Social Experience

Compared with ordinary functional Internet products, online learning emphasizes the importance of interaction and connection with classmates and teachers. By communicating with classmates and teachers about learning or answering questions, users could make better progress in learning. Wu (2008) and Du and Fan (2007) indicated a significant relationship between social experience and user perceived value in teahouse and group tourism industries.

Relationship between System Quality and User Experience

In the success model of an information system, the system quality is generally measured by the indicators such as ease of use, reliability, flexibility, and integration. The online education platform system has unique features compared to the general information system. Edutools, a famous online education platform evaluation website, proposed (2006) an evaluation system for the system functions of online education platform, in which the learning management module was proposed for users, which was divided into communication tools, efficiency tools, and student participation tools, and contained dozens of second-level indicators and evaluation rules. Han, Ge, and Zhou (2010) compared the MOOC, open-source, and commercial education platforms and then expanded the evaluation system. By referring to the Edutools evaluation system and combining it with the development of online education platforms in recent years, this research divides the online education platform systems into learning effectiveness tools, learning communication tools, and student participation tools. Among them, the learning effectiveness tools mainly include the video playback (live/recorded), notes, the course catalog, assignments, and other functions, learning communication tools including forum, download file exchange, course material, such as real-time chat features, students participate tools including grouping, self-reported

mutual, student community, student files, etc. In this study, the system quality of online education platforms is divided into learning effectiveness tool quality, learning communication tool quality, and student participation tool quality.

The functionality and quality of the system have a significant impact on the user experience. O'brien (2010), Cao (2009), Zhang, Zhao, and Yu (2013) respectively stated that the specific functional quality of websites in online shopping websites, government websites, and B2C e-commerce websites has a significant impact on user experience. Similarly, in online education platforms, system quality may affect user experience. Firstly, user functional experience will be affected by whether the various functions and quality provided by the platform could meet users' learning needs. Secondly, in the process of using functions, the richness of functions and the timeliness of response may affect users' emotions. Finally, the online education platform's communication, discussion, and other functions are the basis for users to establish contact with teachers and other students, and the quality of the functions will affect users' social experience.

Relationship between Course Quality and User Experience

The online education environment is mainly about the quality of education course content, which is evaluated from a very different perspective from the traditional information quality. In the "network course evaluation standard" issued by the education information technology standard committee of the Ministry of Education (2012), the course content is evaluated from the aspects of consistency of content goal, science, education, content arrangement, resource expansion, etc. Bourne, Harris, and Mayadas (2005) indicated that courses in online learning should be tailored to the context and needs of individual learning. Sloane (1997) believes that online course content should be rich and meet the needs of different groups. Based on previous studies on the content quality of online courses, this study evaluates the course quality from four dimensions: timeliness, pertinence, authority, and richness. Among them, the course's timeliness means that the course's content is updated in time, and the latest progress in the field is provided. The pertinence of the course means that the course is consistent with the user's learning goal and meets the

learning needs. Authority means that the curriculum content is scientific and rigorous and comes from authoritative experts or institutions. Curriculum richness means that the content of the courses on the platform is rich and diverse, covering multiple fields. In online education platforms, users reach their final learning goals through learning course content, and the quality of the course will have an important impact on user experience. Garrett (2007) pointed out that the quality of information contained in a website is an important factor affecting the user experience of a website. Su (2011) and Li (2011) respectively found that good content in C2C e-commerce sites and online learning sites would positively influence user experience and satisfaction. For the online education platform, course content is the main way for users to acquire knowledge. It is the key to meeting users' learning needs, which will impact users' functional experience. Whether the teaching content in the course is vivid and lively and whether the form is varied will affect users' emotional experience.

Relationship between User Interaction and User Experience

In sociology, interaction refers to the interdependent communication activities between individuals, groups, and groups through information transmission in society (Zhen, 2003). The traditional sense of interaction is face-to-face communication. Still, in the information age, the interaction could be carried out through various network tools. Interaction is also called interaction in pedagogy. In a broad sense, the interaction includes student-to-student activities, student-to-teacher interactions, and student-to-learning environment interactions. Interaction in a narrow sense is similar to the definition of interaction in sociology, which is generally regarded as the communication between people, including the interaction between students and teachers and the interaction between students. Many scholars have studied the relationship between interaction and experience. Walter et al. (2010). and Klaus (2012) studied the relationship between human-enterprise interaction and the customer experience in restaurant and enterprise service and revealed that customers would have a good experience communicating with service personnel. Tu and Chen (2015) presented that the interaction between users in non-transaction virtual communities has a positive impact on users' emotional experience and social experiences. During online learning, users could

exchange knowledge and discuss problems and questions with teachers and classmates, which would help them learn and influence the functional experience. Moreover, the interaction process would bring users a sense of stealing pleasure and a good emotional experience; Simultaneous interaction allows users to connect with others, make friends, and influence the social experience.

The conceptual framework of this study is summarized in Figure 1. In this theoretical framework, factors include online educational system quality, course quality, and user interaction. These are necessary for Yunnan users to get an online learning experience and then affect their perceived value towards the online education platform, resulting in the continuous use intention of the online education platform.

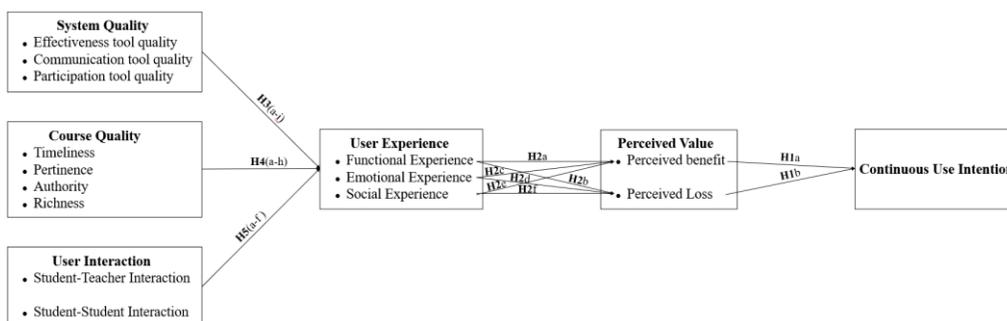


Figure 1. Conceptual Framework

Research Methodology

Sample

This research is a quantitative design using an online questionnaire to collect data with a convenience sampling approach from Chinese users who has an online learning experience in online education platform such as Coursera, MOOC, edX, Tencent Classroom, etc., within the past year in Yunnan province. Since the target population of this study is difficult to define in actual size, the formula of Cochran (1977) will be chosen for calculating the sample size used in the quantitative analysis. With the 95% confidence level expected, the actual sample size was 385. We received 456 responses. After discarding the invalid responses (giving all the items the same value), we obtained 422

valid samples for data analysis.

Scale Measurement

The questionnaire consisted of two sections. The first section covered respondents' demographic information such as gender, age, education level, years of an online learning experience, and their favorite online learning platform. The second section included the measurements to measure the six constructs identified in the conceptual model. In order to measure the constructs, pretested items were adopted from previous literature. The questionnaire was developed using the multiple item method, and each item was measured based on a five-point Likert scale ranging from "1=strongly disagree" to "5=strongly agree". Table 1 illustrates the adaptation of measurements from different researchers.

Reliability and Validity

The results found that Cronbach's α of each construct was .91-.95, which shows high reliability for our survey instrument (Nunnally,1978). Furthermore, our results revealed that the factor loadings of all the constructs exceeded 0.5 and thus conformed to the test of item reliability (Hair et al.,1995). The composite reliabilities (CR) for all the constructs are far above the 0.7 cut-off point, exhibiting adequate construct reliability (Fornell & Larcker, 1981). Average extracted variance (AVE) from each construct exceeded 0.5, demonstrating convergent validity (Fornell & Larcker,1981). Table 3 shows that the values of Cronbach's α , CR, and AVE for each model construct satisfy the thresholds.

Measurement and Structural Model Analysis

According to the above conceptual model, AMOS23.0 software is used for structural equation modeling. Firstly, the model's fit was verified and assessed based on six key indices. The results in Table 4 indicated that all indices fulfill their threshold values, confirming the good fit of the model. And then, the structural model was analyzed and fitted. All of the values reach their recommended values (Table 4). Therefore, the structural equation model is acceptable.

Table 1. *Fit Indices of Measurement and structural models*

Fit indices	χ^2 /df	GFI	AGFI	CFI	NFI	RMSEA
Recommended Values	<3	>0.9	>0.8	>0.9	>0.9	<0.05
Measurement Model	2.006	0.914	0.907	0.953	0.942	0.042
Structural Model	2.011	0.915	0.906	0.951	0.940	0.042

Hypothesis Testing

The hypotheses were tested as described in Figure 2, and the result of hypothesis testing are shown in Figure 2.

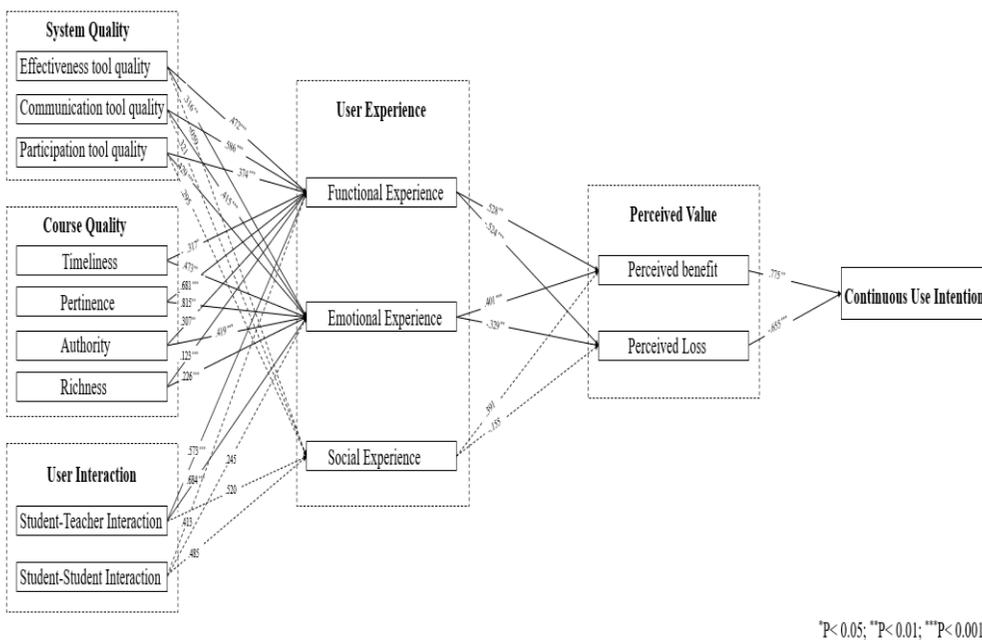


Figure 2. Results of Analysis of Structural Modeling with Hypotheses

From Figure 2, concerning H1a and H1b, users' perceived benefit has a significant positive effect on user willingness to continue using online education platform ($\beta=0.775$, $p < 0.001$), and users' perceived loss has a significant negative effect on user willingness to continue using online education platform ($\beta=-0.655$, $p < 0.001$). Therefore, hypotheses H1a and H1b are fully supported. In addition, user experience, including both functional experience ($\beta= 0.528$, $p < 0.01$) and emotional experience ($\beta= 0.401$, $p < 0.001$),

had a significant positive effect on their perceived benefit on the online education platform which means that H2a and H2c are supported. Meanwhile, supporting H2b and H2d, functional experience ($\beta = -0.542$, $p < 0.001$) and emotional experience ($\beta = -0.329$, $p < 0.001$) were found to have a significant negative effect on their perceived loss on an online education platform. With regard to H2e and H2f, user social experience does not have any significant effect on the use of perceived value toward online education platforms (perceived benefit: $\beta = 0.391$, $p > 0.05$; perceived loss: $\beta = -0.155$, $p > 0.05$). Therefore, H2e and H2f failed to be supported. Regarding H3a, H3d, and H3g, the system quality of the learning platform includes learning effectiveness tool quality ($\beta = 0.472$, $p < 0.001$), learning communication tool quality ($\beta = 0.586$, $p < 0.001$), and student participation tool quality ($\beta = 0.374$, $p < 0.001$). All significantly positively affect users' functional experience, which means that H3a, H3d, and H3g were fully supported. Similarly, we find that learning effectiveness tool quality ($\beta = 0.316$, $p < 0.01$), learning communication tool quality ($\beta = 0.415$, $p < 0.001$), and student participation tool quality ($\beta = 0.429$, $p < 0.001$) all have a positive influence on the emotional experience of users. Thus, H3b, H3e, and H3h were supported. However, the system quality of the learning platform has no significant relationship with users' social experience (ETQ: $\beta = 0.059$, $p > 0.05$; CTQ: $\beta = 0.321$, $p > 0.05$; PTQ: $\beta = 0.295$, $p > 0.05$). Therefore, hypothesis H3c, H3f and H3i are rejected. In support of H4, we find that the course quality of the learning platform, including timeliness of course, course pertinence, course authority and course richness, is significant positively correlated with the experience of user's functional experience (TC: $\beta = 0.317$, $p < 0.05$; CP: $\beta = 0.681$, $p < 0.001$; CA: $\beta = 0.307$, $p < 0.01$; CR: $\beta = 0.123$, $p < 0.001$) and emotional experience (TC: $\beta = 0.473$, $p < 0.001$; CP: $\beta = 0.815$, $p < 0.01$; CA: $\beta = 0.419$, $p < 0.001$; CR: $\beta = 0.226$, $p < 0.001$) of the online education platform, so H4a, H4b, H4c, H4d, H4e, H4f, H4g and H4h were all supported. With regards to user interaction, Student-Teacher interaction has a significantly positive impact on the user functional experience ($\beta = 0.573$, $p < 0.001$) and emotional experience ($\beta = 0.684$, $p < 0.001$). But we find the relationship between Student-Teacher interaction and user social interaction ($\beta = 0.520$, $p > 0.05$), which means that H5a and H5b were supported while H5c was rejected. The result, however, indicated that H5d, H5e, and H5f were not supported. Therefore, Student-Student interaction failed to have a significant

relationship with user experience. All the results are summarized in Table 5 below.

Discussion

This research aims to investigate the factors such as platform system quality, course quality, and user interaction influencing willingness to continue using online education platforms from the user experience and perceived value perspective. The author obtained the following results through empirical research. First, perceived value positively impacts the willingness to continue using. The higher the perceived benefit of users, the stronger the willingness to continue using the online education platform. The higher the perceived loss, the lower the willingness to continue using the online education platform. Currently, the competition in the online education market is fierce, and users' demands for the online education platform are more diversified. Still, the primary goal of users using the platform is to acquire knowledge. In using the platform in the learning process, the user's perception of the gains was promoted through some methods such as sense good feelings in the system's performance, curriculum, skills or knowledge of ascension, making friends, etc. And a bad experience would lead to users spending more time and learning costs. Huang, Lin, and Chuang (2007) and Jiang (2015) found that perceived value positively impacts the intention to use online learning. Ouyang (2014) also proved the impact of perceived value on the acceptance intention of paid online learning from the perspective of perceived gain and perceived loss. In the fields of mobile banking, 3G mobile value-added services, mobile commerce, and mobile Internet, Luarn and Lin (2005), Kim and Chan (2009), and Zhou et al. (2009) also revealed the influence of perceived value on users' behavioral intention, indicating that this conclusion is universal in multiple fields.

Second, user experience has a significant impact on perceived value. The functional experience of an online education platform mainly refers to the knowledge users learn through the platform and the convenience brought to users by its platform functions. When the functional experience is improved, the user's perceived gain will increase, and the perceived loss will decrease. When users learn online, the main perceived value enhancement comes from

improving their own knowledge or skills. For users, the online education platform could be used to learn the expected knowledge conveniently, and the functional design of the platform would effectively improve their learning efficiency so that users will have a higher functional experience, and the perceived benefits will also increase.

On the other hand, well-designed features reduce the user's time and learning costs, and the perceived loss is also reduced. In the field of Internet products and festival consumption, Nie (2013) mentioned that the user's functional experience significantly affects the perceived value, and the lack of functions would lead to customer dissatisfaction and complaints. This also confirms that functional experience significantly impacts the improvement of user-perceived value in multiple domains. In addition to functional experience, emotional experience also impacts perceived value. Emotional experience measures whether users are happy when using an online education platform, and the results show that when users are in a good mood during the learning process, their perceived value is increased. This is similar to the traditional pedagogy view that a good mood has an important effect on learning knowledge. Learners will have various emotional experiences during watching learning videos and communicating with others, which will further affect the effect of learning. In the study of user behavior of IPTV products and the retail industry, Lei (2015) also found that emotional experience significantly impacts user-perceived value and satisfaction. Users' emotional experience, such as emotions and moods when using Internet products, will directly affect their perceived value. Therefore, online education platforms need to ensure users' emotions in the process. However, in this study, there is no correlation between social experience and users' perceived value of online education platforms. The reason might be that learning is a focused and individual activity for most people, and meaningless social activities that have nothing to do with learning only cause users to waste more time. Kang and Im (2013) have similar ideas. They pointed out that teaching-related interactions could improve users' perceived achievement, while overly intimate social behaviors would reduce users' satisfaction.

Third, this study reveals that the higher the quality of learning effectiveness

tools, the better the user's functional and emotional experience. Learning effectiveness tools mainly include video playback (live/recorded), note-taking, course catalog, assignment submission, and other functions, which are the basic functions used in the learning process for users. Most online education platforms provide the basic form of courses through video playback. Whether the video playback is smooth, the picture quality is clear, and the video playback supports note-taking simultaneously, all these functions directly affect the user's functional experience. In the process of using the function, the click's responsiveness and the operation's convenience will affect the user's mood and emotional experience.

On the contrary, because learning effectiveness tools contain almost no social functions, they have no significant relationship with users' social experience. Besides, the higher the quality of learning communication tools, the better the user's functional and emotional experience. Learning communication tools include discussion boards, file exchanges, course material downloads, real-time chats, and other functions. These functions could be simply divided into two categories: firstly, file exchange and course material download are supplementary to the effective tools, which are information exchange between learners and teachers, to assist learning better; discussion board and real-time chat are more of a social function. Secondly, as with effective tools, stability and functional perfection of learning and communication tools could affect users' functional and emotional experience. In terms of e-commerce websites and government websites, Oerien (2010), Cao (2009), and Zhang et al. (2013) also noted that the specific functional quality of websites has a significant influence on user experience, proving that the impact of system quality on user experience is widespread in many fields.

Fourth, this study revealed the impact of course quality on user experience. The better the timeliness, pertinence, authority, and richness of the courses on the platform, the better the user's functional and emotional experience will be. Cho (2015) and Zhang et al. (2011) also confirmed that course quality was an important factor affecting user satisfaction and behavior. In news websites and e-commerce, Garret (2007) and Su (2011) have also confirmed that the quality of information contained in websites is an important factor affecting the user

experience of websites. Overall, it is found that information content quality is a key factor affecting user experience in content Internet products (education, news, etc.).

Fifth, the impact of interaction on user experience is also found in the present study. The more learners interact with teachers, the better the user's functional and emotional will be. From the discussion area of major online education platforms and the author's experience participating in online learning, the communication between the learner and the teacher is basically to ask the teacher questions related to the learning content. The teacher's reply may help learners quickly understand the key points and improve the functional experience of learning. Meanwhile, the reply from teacher will make the learner feel happy and valued and then improve their emotional experience. Scholars have previously studied the influence of interactive behavior on user behavior. Rodrigues, Sabino, and Zhou (2011), Peltier, Schibrowsky, and Drago (2007) have found that learning interaction between students and teachers can enhance user experience and affect users' perception of the learning effect. However, this study did not find that the interaction between learners would impact the user experience of the online education platform. The reason might be that when users encounter difficulties and problems, they first think the target for help is the course teacher rather than their fellow classmates. Teachers were expected to be more professional in their answers but more social in their interactions with students. This result is inconsistent with Walter et al. (2010) and Klaus's (2012) findings. Tu and Chen (2015). They explored the positive impact of human-enterprise interaction and user-to-user interaction on user experience in restaurant service and non-transactional virtual communities. By comparison, it can be found that the influence of interaction factors in online education is different. Users are more inclined to interact with teachers, while the interaction with classmates is more for a social experience such as making friends.

Limitations and Recommendations for Further Research

There are a few limitations to this research that should be noted when understanding its findings. Firstly, the data collection was done through a non-randomized sampling, using a conventional technique that makes the sample

biased, so it is necessary to be careful in interpreting the results of this study rather than being excessive in their generalization. Furthermore, this sample had 422 valid responses, which is a relatively small size for Yunnan province and the age level of this research sample is mainly between 19 and 30 years old, and the educational level is mainly undergraduate and graduate students. Although the sample distribution is consistent with the mainstream online education user groups, it does not include all user groups. Future research could further enrich the research samples to become more representative. And adopt stratified sampling to obtain a wider sample coverage to truly reflect the user behavior of the vast number of online education users. Finally, we use only quantitative methods with close-ended questions and scales. Therefore, open opinions and suggestions from respondents are necessary to find more input on what would be the influence factors toward online learning users' willingness to continue using online education platforms. For future studies, the findings from this study could be a starting point to collect an open-ended response from respondents.

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