

## **FACTORS INFLUENCING THE SATISFACTION OF USERS CONTINUOUS USAGE INTENTION ON EDUCATIONAL PAID PLATFORMS AT HIMALAYA PLATFORM**

**Boyu Cui**<sup>1\*</sup>

<sup>1</sup> Graduate School, Siam University of Thailand

\* Corresponding Author, E-mail: 1651753299@qq.com

**Abstract:** With the widespread acceptance of online learning methods and strong support from national policies, the market size of online education has rapidly expanded. However, issues such as low repurchase rates and low user engagement have gradually emerged in the development of online educational paid platforms. Users' willingness to continuously pay for services significantly impacts these platforms. Therefore, this study focuses on exploring the factors influencing user satisfaction with continued use of knowledge-based paid platforms.

The objectives of this study are: 1) To explore the key factors affecting user satisfaction with continuous use on educational paid platforms. 2) To verify that the quality of information, system quality, and service quality of online educational paid platforms positively influence user satisfaction, which in turn affects users' willingness to continue paying. This study uses the "Himalaya" online education platform as a case and employs quantitative research methods. Data was collected through a questionnaire survey, yielding a total of 368 valid samples.

The research results show that: 1) User satisfaction with educational paid platforms is influenced by the quality of information, system quality, and service quality of the platform, which further affects users' willingness to continue paying. 2) The three factors—information quality, system quality, and service quality—significantly positively impact user satisfaction, thereby influencing their intention to continue using and paying for the platform.

Understanding the factors affecting user satisfaction with continuous use on educational paid platforms is crucial for retaining the user base. This study provides feasible suggestions for knowledge-based paid platforms to enhance user engagement and repurchase rates.

**Keywords:** Educational Paid Platforms, User Satisfaction, Continuous Payment Intention

### **Introduction**

In the context of the comprehensive penetration of "Internet Plus," traditional industries are exploring transformation paths by integrating with the Internet. With the maturity of internet

technology and the rapid popularization of internet applications, people's adoption of online education has gradually increased. At the same time, the Chinese government has been increasing its support for the education sector and the education industry year by year (Li, 2019). Thanks to stable market demand and a favorable policy environment, China's online education market has developed rapidly (Chen, 2020). Relevant data shows that in 2017, the number of online education users in China reached 155.18 million, an increase of 17.54 million from the previous year, with an annual growth rate of 12.7%. Among these, the number of paying users accounted for 70% of the total user base.

Why choose Himalaya as the research subject? This study considers Himalaya to be one of the earliest knowledge payment platforms, and the wave of knowledge payment has shaped its current status. According to the "2018-2019 Content Payment Industry White Paper" released by the authoritative third-party institution Xinzhi List, Himalaya accounted for more than 50% of content consumption products in 2018 (Zhang, 2019).

According to the "2019 China Online Audio-Visual Development Research Report," Himalaya maintained a user penetration rate of 62.8% with its rich and high-quality content, far surpassing other platforms in the knowledge payment industry (Suo, 2016). Therefore, this study considers it representative to investigate the factors influencing users' continuous payment intention on knowledge payment platforms using Himalaya as an example.

### **Research Objectives**

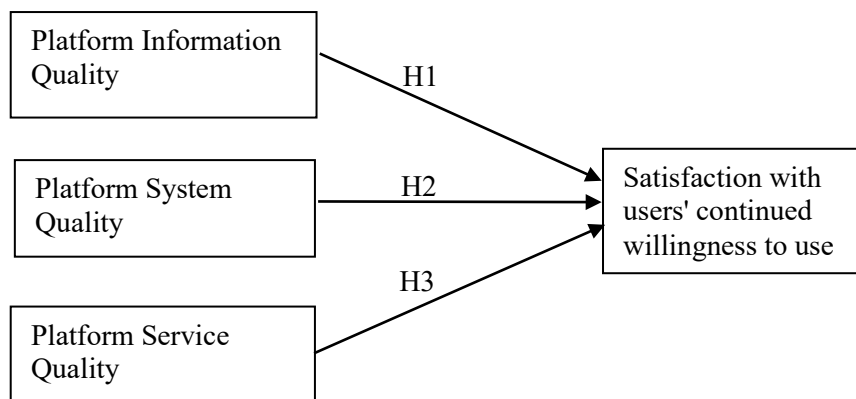
Given the current abundance of educational paid platforms, this study selects the representative "Himalaya" knowledge payment platform for a case study. Structural Equation Modeling (SEM) was used to test and analyze the model paths and research hypotheses, aiming to clearly understand how different factors influence users' continuous payment intention. This research hopes to assist knowledge payment platforms in optimizing their services during development and ultimately formulating targeted strategies to enhance user engagement and repurchase rates. The specific research objectives are as follows:

1. To analyze the factors influencing user satisfaction with continuous usage on educational paid platforms.
2. To verify three factors of platform's information quality, platform's system quality, and platform's service quality have a significant positive effect on the satisfaction of users' continuous use of the platform in the category of paid education.

### **Research Hypotheses**

To analyze the factors influencing users' willingness to continue paying for educational platforms, this study constructs a model with the platform's information quality, platform system

quality, and platform service quality as independent variables. The satisfaction with the willingness to continue using the platform is the dependent variable. The willingness to continue paying for educational platforms is influenced by the combined effects of the platform's information quality, platform system quality, and platform service quality, as shown in Picture 1.



**Picture 1:** Hypotheses

H1: The information quality of educational paid platforms positively influences user satisfaction with the willingness to continue using the platform.

H2: The system quality of educational paid platforms positively influences user satisfaction with the willingness to continue using the platform.

H3: The service quality of educational paid platforms positively influences user satisfaction with the willingness to continue using the platform.

## Literature Review

The literature review of this study aims to user-centred design theorys, Information Systems Success Theory, and User Satisfaction Theory as the basis for identifying factors influencing users' continuous payment intention in the usage of educational paid platforms. By employing a literature review approach, it seeks to clarify the factors influencing user satisfaction. This paper conducts a review and analysis of the literature, followed by brief comments on the basic theories and related attribute literature, aiming to understand the relationship between this study and existing literature research, grasp the development context of research, and lay a theoretical foundation for subsequent studies.

### *Education Platform Payment*

The essence of knowledge payment lies in transforming products into services or realizing their commercial value (Yang, 2019). Knowledge payment refers to the economic phenomenon where the public shares idle resources for value through internet platforms (Zhou & Zhang, 2020). It is a commercial model of sharing knowledge and information for a fee (Song, 2018). The essence of

knowledge payment is an information consumption behavior (Li & Ai, 2020). Knowledge payment refers to users purchasing knowledge products or services on paid platforms in the era of the knowledge economy (Zhang, 2019).

The above scholars have different views on the connotations of online education payment. Some scholars believe from an economic perspective that knowledge payment is a new profit model, while others see it as payment for valuable content. Some scholars view online education payment fundamentally as knowledge sharing.

#### *Willingness to Sustain Payment*

User continuance is considered more important than initial acceptance. The willingness to sustain usage refers to consumers' willingness to continue purchasing a product or service in the future based on their experiences with the product or service they have already purchased (Song, 2018). The willingness to sustain payment is derived from the willingness to pay and mainly refers to users' intention to continue paying for learning in virtual communities (Ning, 2019). It is defined as users' subjective willingness to continue using a platform after their initial use of the platform (Ying, 2019).

This study notes the scarcity of literature specifically addressing "willingness to sustain payment." Therefore, this study defines the willingness of users of knowledge payment platforms to sustain payment as the intention of users to make another payment after purchasing knowledge products or services on the platform.

#### *Platform Information Quality*

Information quality is a core element of online education payment platforms, directly impacting users' learning experiences and outcomes. Information quality primarily includes the following aspects:

(1) Richness and depth of course content: Platforms should offer courses covering multiple subject areas and ensure the content has a certain level of depth to meet the learning needs of different users (Ning, 2019).

(2) Speed of information updates: With knowledge continuously evolving, platforms should promptly update course content to ensure users can learn the latest knowledge (Zhang, 2019).

(3) Reliability of information: Platforms should ensure that the provided course content comes from authoritative institutions or experts to avoid misleading users (Liu, 2018).

#### *Platform System Quality*

Platform system quality is the technical assurance of online education payment platforms, affecting the stability and convenience of user platform usage. Platform system quality mainly includes the following aspects:

(1) System stability: The platform should have high system stability to ensure users do not

encounter frequent crashes or failures during usage (Sun, 2016).

(2) Operational convenience: The platform's user interface should be clear and concise, with a reasonable operation process, making it easy for users to quickly find the desired courses and start learning (Li, 2015).

(3) Compatibility and response speed: The platform should support multiple devices and browsers while having fast response speeds to enhance user experience (Zhao, 2014).

#### *Platform Service Quality*

Platform service quality is the soft power of online education payment platforms, directly influencing users' overall satisfaction with the platform. Platform service quality mainly includes the following aspects:

(1) Customer support: The platform should provide timely and effective customer support services to resolve issues encountered by users during usage (Wang, 2020).

(2) User feedback mechanism: The platform should establish a sound user feedback mechanism to collect and address users' opinions and suggestions promptly, continuously improving services (Liu, 2018).

(3) Refund and course exchange policies: The platform should provide reasonable refund and course exchange policies to protect users' rights (Chen, 2011).

In summary, the information quality, platform system quality, and platform service quality of online education payment platforms are three important aspects for evaluating their merits. Each platform should continuously optimize and enhance these three aspects to provide better online education services and meet users' learning needs.

#### *User-Centered Design Theory*

In 1980, Oliver first proposed the Expectation and Disconfirmation Theory while studying consumer satisfaction. Building on other scholars' research, Churchill et al. expanded on the Expectation Confirmation Theory and its model by incorporating user-perceived performance into the model, resulting in the widely used Expectation Confirmation Model in academia. This theory systematically explains the mechanism from a user's expectations before purchasing a product, through their perception of the product after purchase, to the final decision to repurchase. It describes the relationships between various variables. The theory asserts that users' expectation confirmation can significantly influence satisfaction and the intention to continue purchasing (using) the product (Churchill et al., 1982).

#### *Information Systems Success Theory*

The study of information systems originated in the United States. With the rapid development of information systems, how to construct metrics to measure their effectiveness has become a focal point for theorists. Consequently, scholars both domestically and internationally have evaluated and

measured the effectiveness of information systems based on different research contexts, yet a comprehensive and widely applicable theoretical framework has always been lacking (Liu, 2018).

#### *User Satisfaction Theory*

To improve user satisfaction, enterprises need to focus on several aspects: first, enhancing product quality to meet user needs; second, optimizing service processes to improve service quality and user experience; third, setting reasonable prices to ensure product competitiveness; fourth, building a good brand image to increase user recognition and trust; and fifth, paying attention to user feedback to continuously improve products and services (Oliver, 1999).

User satisfaction theory studies the degree of user satisfaction during the use of products or services and its influencing factors. Through research on user satisfaction, enterprises can better understand user needs, improve the quality of their products or services, and thus enhance user satisfaction and loyalty.

#### **Methodology**

This paper employs a quantitative research approach. Based on existing theories and previous studies, the content of the scale items was confirmed, and the questionnaire was distributed and analyzed. SPSS was used for reliability and validity analysis of the questionnaire data.

The scale items related to respondents' personal attitudes, which are difficult to quantify, are measured using a Likert five-point scale. This scale quantifies respondents' subjective attitudes into specific scores: 1 to 5, representing "very dissatisfied," "dissatisfied," "neutral," "satisfied," and "very satisfied," respectively. Higher scores indicate a higher level of agreement with the item statement, thereby achieving quantification of latent variables.

The questionnaire consists of 26 questions. Questions with seven items each for the information quality, platform system quality, and platform service quality of educational paid platforms, and five items for the satisfaction with the willingness to continue using the platform. The Likert five-point scale is used, with scores ranging from 1 to 5, representing very dissatisfied, dissatisfied, neutral, satisfied, and very satisfied, respectively. Higher scores indicate a higher level of agreement with the item. Each variable has corresponding items designed and coded, as shown in Table 1.

The survey questionnaire link and QR code were distributed via social media apps with large user bases, such as WeChat and QQ, and friends were invited to fill out and share the questionnaire. Ultimately, a total of 445 questionnaires were collected. The survey was conducted over a period of three months, from February 2024 to May 2024, spanning 91 days.

After the survey collection concluded, the study excluded invalid questionnaires according to predefined criteria, resulting in 386 valid questionnaires, achieving an effective rate of 86.7%.

**Table 1:** Factors affecting willingness to pay consistently

Variable	Measurement items	NO.
Platform Information Quality	1. Are you satisfied with the accuracy of the content of paid online education courses?	Q1
	2. Are you satisfied with the professionalism of the content of paid online education courses?	Q2
	3. Are you satisfied with the practicality of the content of paid online education courses?	Q3
	4. Are you satisfied with the entertaining content of paid online education courses?	Q4
	5. Satisfied with the comprehensiveness and richness of the content of online education paid courses?	Q5
	6. Are you satisfied with the timeliness of updating the content of online education paid courses?	Q6
	7. Are you satisfied with the safety of operating the stereo garage system in and out?	Q7
Platform System Quality	1. Education paid platforms are easy to operate satisfactory?	Q8
	2. Are you satisfied with the stability of the platform system for the education payment category?	Q9
	3. Are you satisfied with the user-friendliness of the interface of the paid education platform?	Q10
	4. Are you satisfied with the reasonableness of the functional module settings of the education payment platform?	Q11
	5. Are you satisfied with the functional top-up security of the education pay-per-view platform?	Q12
	6. Are you satisfied with the offline playback smoothness of the educational pay-per-view platform?	Q13
	7. Are you satisfied with the compatibility of the platform system for the education payment category?	Q14
Platform Service Quality	1. Are you satisfied with the reliability of the customer service line answering questions on paid education platforms?	Q15
	2. Education paid platform customer service line answer questions in a timely manner to respond to the satisfaction of the sex?	Q16
	3. Education paid platform customer service line answer the question and answer accurately and satisfactorily?	Q17
	4. Education paid platform customer service line recommended custom fit course satisfaction?	Q18
	5. Are you satisfied with the frequency of return visits to paid education platforms?	Q19
	6. Are you satisfied with the courses pushed by paid education platforms?	Q20
	7. Satisfied with the reasonableness of the pricing of the paid education platforms?	Q21
Satisfaction with users' continued willingness to use	1. Are paid-for-education platforms satisfied with improving learning outcomes?	Q22
	2. Is there an opportunity to reach out to more knowledge satisfaction in the paid education category?	Q23
	3. Are many of the knowledge products of the paid education platforms satisfactory in terms of feeling interesting?	Q24
	4. Are you satisfied with the knowledge you learnt from the paid platforms in terms of applying it to your life, study and work?	Q25
	5. Satisfied with the overall feeling brought by the paid education platforms?	Q26

The criteria for excluding questionnaires included identical IP addresses, and consistent answers for five consecutive items. Additionally, based on Bentler's (1987) viewpoint, the number of valid questionnaires in empirical analysis should be 5 to 10 times the number of variable items. The questionnaire in this study includes a total of 33 variable items, and the 386 valid questionnaires exceed 10 times this number, ensuring the adequacy of the sample size. This guarantees the feasibility and scientific validity of the questionnaire, as well as the reliability and effectiveness of the study.

Reliability refers to the consistency of a measure with the variable it is intended to measure. It assesses the extent to which scores can be trusted. The higher the reliability, the less error is introduced into scores from different items on the same scale.

Therefore, scores on the scale move in a consistent manner among respondents, reflecting the true state of affairs. Greater consistency indicates higher reliability, and vice versa. In this study, Cronbach's Alpha is used as the basis for assessing questionnaire reliability. Generally, Cronbach's alpha values range from 0 to 1. A higher Cronbach's alpha coefficient indicates higher questionnaire reliability. All values are greater than 0.8, indicating high stability and consistency of the scale. This demonstrates excellent questionnaire reliability in the present study, as shown in Table 2.

**Table 2:** Variable Reliability Tests

Variable	Cronbach Alpha	N of Items
Platform Information Quality	0.856	7
Platform System Quality	0.880	7
Platform Service Quality	0.895	7
Satisfaction with users' continued willingness to use	0.901	6

Validity refers to the examination of the validity of each variable in the questionnaire. Factor analysis is a commonly used method to test the validity of a questionnaire. The validity of the questionnaire is determined through factor analysis. The KMO test and Bartlett's sphericity test of the questionnaire need to be conducted before principal component factor analysis. Factor analysis can only be conducted if the KMO value is greater than 0.7. The survey data show that the overall KMO value is 0.907, with a significance of 0.000, which is less than 0.05, reaching a significant level, indicating that factor analysis can be performed. This study employs confirmatory factor analysis (CFA). The results of factor analysis on each variable indicate that the KMO and Bartlett's sphericity tests were conducted on the pre-test data to validate the structural validity of the scale. The results are shown in Table 3, with KMO values exceeding 0.8 and significant Bartlett's sphericity test, indicating good structural validity of the scale. This implies good independence of each dimension, indicating good overall validity of the questionnaire.



**Table 3:** KMO and Bartlett's test

Kaiser -Meyer -Olkin Sampling Adequacy Measures		0.837
Bartlett's test of sphericity	Approx. CARTES	6942.00
	df	194
	organizations	0.000

**Results**

Correlation analysis is primarily used to illustrate the relationships between various variables. Pearson correlation analysis is employed to elucidate the linear relationships between variables, with Pearson correlation coefficients ranging from -1 to 1. Utilizing Pearson correlation coefficient analysis, an examination of the relationships among the factors influencing impulsive purchasing was conducted. Based on Table 4, conclusions can be drawn. The Pearson correlation coefficients for platform information quality, platform system quality, platform service quality, and user satisfaction with continuous usage intention are all greater than 0.5 but less than 0.9, with a significance level of  $P < 0.01$ . This indicates the existence of correlations and positive correlations among the variables.

**Table 4:** Correlation between variables (Pearson correlation matrix)

Variable	Platform Information Quality	Platform System Quality	Platform Service Quality	Satisfaction with users' continued willingness to use
Platform Information Quality	1			
Platform System Quality	.591**	1		
Platform Service Quality	.551**	.665**	1	
Satisfaction with users' continued willingness to use	.572**	.692**	.675**	1

Note: \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

From the table, it is evident that the Pearson correlation coefficients for platform information quality, platform system quality, platform service quality, and user satisfaction with continuous usage intention are all greater than 0.5 but less than 0.9, with a significance level of  $P < 0.01$ . This indicates the presence of correlations among the variables, and they are positively correlated.

Therefore, to enhance user satisfaction and cultivate loyal customers who continue to pay, it is necessary to focus on these three aspects and adopt reasonable and scientific management methods. The correlations between variables suggest that each variable plays a certain role in the model, reflecting the rationality of the model construction.

**Discussion**

Through correlation and regression analysis, Pearson correlation coefficients for platform information quality, platform system quality, and platform service quality are obtained. The Pearson

correlation coefficients are 0.591, 0.551, and 0.572 respectively. All are greater than 0.5 but less than 0.9, with  $p < 0.01$ , indicating the presence of correlations between variables. In the regression analysis, a regression model is constructed, with coefficients of 0.145 for platform information quality, 0.218 for platform system quality, and 0.112 for platform service quality, indicating positive correlations between each variable and user satisfaction with continuous usage intention.

The research results demonstrate that factors such as platform information quality, platform system quality, and platform service quality influence user satisfaction with continuous usage intention. These factors positively impact user satisfaction with continuous usage intention. Through research analysis, it is evident that improving user satisfaction requires addressing platform information quality, platform system quality, and platform service quality, and implementing appropriate and scientific management methods.

## Conclusions

In the digital era, the quality of information, system quality, and service quality of online education platforms have a significant positive impact on users' continued usage intentions, as exemplified by platforms like Himalaya. These factors not only greatly enhance the user learning experience but also become key determinants of whether users are willing to use the platform in the long term.

*1) Positive Impact of Platform Information Quality on User Satisfaction with Continuous Usage Intention.*

High-quality course content that meets users' specific learning needs makes them feel that what they are learning is closely related to their career development or interests, thus motivating them to continue using the platform.

*2) Positive Impact of Platform System Quality on User Satisfaction with Continuous Usage Intention.*

Intuitive user interface design, fast server response, and stable platform operation help reduce users' learning costs and increase their acceptance and willingness to use the platform. Additionally, support for multi-device access and consistent user experience strengthens users' trust in the platform. Advanced data encryption and security technologies, along with clear privacy policies, further ensure the security of user information and increase user reliance on the platform.

*3) Positive Impact of Platform Service Quality on User Satisfaction with Continuous Usage Intention.*

When users encounter problems, being able to quickly contact the platform through various channels and receive timely feedback and resolution greatly enhances user satisfaction and improves their goodwill and willingness to continue using the platform.

In summary, to enhance users' continued usage intentions for online education platforms, it is essential to improve information quality, optimize system quality, and enhance service quality.

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