Research on the Usage Behavior and Mechanism of Knowledge Payment Apps Among College Students: A Case Study of Fluent Reading (Postprint)

Authors: Zhang Jiaying, Yuan Yuqin

Date: 2023-10-08T00:00:00+00:00

Abstract

[Purpose/Significance] Using the English knowledge payment APP "Fluent Reading" as a case study, this research investigates the factors influencing users' usage behavior of knowledge payment applications and their underlying mechanisms, aiming to provide recommendations for the sustainable development of knowledge payment platforms. [Method/Process] Grounded in the UTAUT model and relevant literature, a theoretical framework was developed and hypotheses were formulated. A mixed-methods research design incorporating interviews and questionnaires was implemented, with collected data analyzed quantitatively using SPSS 22.0, followed by model refinement. [Results/Conclusion] The findings indicate that expectation confirmation and social influence exert the most significant effects on users' usage intention and behavior. Accordingly, it is recommended that knowledge payment platforms cultivate a favorable media image externally while enhancing information quality internally to elevate users' expectation confirmation levels; concurrently, they should leverage users' online social resources and harness social influence to stimulate usage intention and promote usage behavior. Moreover, this study demonstrates that incorporating expectation confirmation constitutes an innovative extension of the UTAUT model.

Full Text

Preamble

A Study on College Students' Knowledge Payment APP Usage Behavior and Its Mechanism—Taking "Fluent Reading" as an Example

Zhang Jiaying, Yuan Yuqin
School of Journalism and Communication, Zhengzhou University, Zhengzhou 450000

Abstract

[**Purpose/Significance**] Taking the English learning payment APP "Fluent Reading" as an example, this study explores the factors influencing users' knowledge payment APP usage behavior and its underlying mechanism, aiming to provide recommendations for the sustainable development of knowledge payment platforms. [**Method/Process**] Based on the UTAUT model and relevant literature, a research model was constructed and hypotheses were proposed. Using a combination of semi-structured interviews and questionnaire surveys, the collected data were quantitatively analyzed using SPSS 22.0, and the model was subsequently revised. [**Results/Conclusion**] The study found that expectation confirmation degree and social influence have the most significant impact on users' usage intention and behavior. Therefore, it is recommended that knowledge payment platforms cultivate a positive media image externally while improving information quality internally to enhance users' expectation confirmation values. Simultaneously, platforms should tap into users' social network resources and leverage social influence to stimulate usage intention and promote usage behavior. Additionally, the study demonstrates that introducing expectation confirmation degree achieves an innovative development of the UTAUT model.

Keywords: UTAUT model; expectation confirmation degree; knowledge payment; user usage behavior; Fluent Reading

Classification Number: G206.2

Citation Format: Zhang Jiaying, Yuan Yuqin. A Study on College Students' Knowledge Payment APP Usage Behavior and Its Mechanism: Taking Fluent Reading as an Example [J/OL]. Knowledge Management Forum, 2019, 4(5): 287-295.

1. Introduction

Knowledge payment is a communication model that generates revenue through the sharing of knowledge and information [1]. According to the "Annual Report on China's Sharing Economy Development (2019)" released by the State Information Center [2], the transaction scale of China's knowledge and skills sharing economy grew rapidly in 2018, increasing by 70.3% compared to 2017. Starting in 2011, users gradually shifted from seeking free resources to pursuing paid professional knowledge. By 2016, the knowledge payment industry had entered a period of explosive growth, with various payment APPs launched in the same year [1]. Against the backdrop of rising education levels, information technology development, and increasing user demand for knowledge, the knowledge

payment industry has gradually evolved into online learning formats such as online courses, voice lectures, Q&A sessions, and self-directed learning. Products like Zhihu Live, Dedao APP, Fenda APP, and Ximalaya FM have continuously improved their knowledge monetization technologies, yet acquiring and retaining users remains a challenge for these non-standardized knowledge payment products.

In recent years, research in the knowledge payment field has focused on two aspects: exploring factors influencing users' knowledge payment intention and constructing models for knowledge payment platforms. This study examines college students' usage behavior of knowledge payment APPs, exploring relevant influencing factors and mechanisms, using the paid course "Fluent Reading" as a case study. Fluent Reading is an English learning payment APP that went viral among college students on social media immediately after its launch in 2018. Its distinctive feature is a viral community mechanism of "check-in for tuition refund" (users can get a full tuition refund by sharing learning check-ins on their social circle for 80 consecutive days), which rapidly acquired more users. Based on the Unified Theory of Acceptance and Use of Technology (UTAUT) and taking college student users of Fluent Reading as the research subject, this study reveals the usage and acceptance behavior of knowledge payment users, aiming to provide guiding recommendations for the development of knowledge payment platforms.

2. Literature Review

2.1 Unified Theory of Acceptance and Use of Technology

The Unified Theory of Acceptance and Use of Technology (UTAUT) is a theory specifically designed to explain users' acceptance and usage behavior of computer information systems. Its predecessor is the Technology Acceptance Model (TAM) proposed by F. D. Davis [3]. The TAM model posits that users' acceptance of computer information systems is influenced by two main factors: perceived usefulness and perceived ease of use. Perceived usefulness refers to the degree to which users believe using a system would enhance their performance, while perceived ease of use refers to the degree to which users believe using a system would be free of effort. However, factors influencing user behavior extend far beyond these two aspects. Scholars M. T. Dishaw and P. Legris incorporated subjective norms into the theory, while F. D. Davis and others further decided to include social factors in the TAM model to address theoretical limitations [4].

Numerous theories explain user system acceptance behavior from different perspectives. Scholar E. M. Rogers proposed the Innovation Diffusion Theory in his book *Diffusion of Innovations*, exploring system usage motivations from the perspective of user acceptance of innovation [5]. Scholars I. Ajzen and M. Fishbein proposed the Theory of Reasoned Action from the perspective that "people are rational," suggesting that attitude and subjective norm determine

behavioral intention [6]. Other theories include the Technology Fit Model, Theory of Planned Behavior, Motivation Model, combined TAM and TPB (Theory of Planned Behavior) model, Model of PC Utilization (MPCU), and Social Cognitive Theory. Scholar V. Venkatesh integrated these eight theoretical models to form a new theory explaining user usage behavior [7], now widely known as the UTAUT model, which offers enhanced explanatory power.

The UTAUT model explains user acceptance and usage behavior through four core constructs: performance expectancy, effort expectancy, social influence, and facilitating conditions, with gender, age, experience, and voluntariness introduced as moderating variables. According to the UTAUT model, performance expectancy, effort expectancy, and social influence directly affect users' usage intention (behavioral intention), which together with facilitating conditions influences actual usage behavior. Facilitating conditions are closely related to technical support, such as the simultaneous availability of networks and computers enabling users to access the internet. The UTAUT model is shown in Figure 1 [Figure 1: see original paper].

2.2 Knowledge Payment

Knowledge differs from information; it is a fluid combination of structural experience, values, contextual information, and expert insight. Knowledge service is a rapidly developing service form in a knowledge-dominated economic society [8]. In simple terms, knowledge payment is a service model where users pay to obtain professional knowledge. According to the *New Media Blue Book: Report on China's New Media Development (2018)*, China's knowledge payment users reached 188 million by the end of 2017, showing a high growth trend. Research on knowledge payment has increasingly attracted domestic scholars' attention since 2017. Users represent the market, and the development of knowledge payment benefits not only from the evolution of knowledge payment platforms and the convenience of mobile online payment methods but also from the explosive demand for (non-)degree education among the middle class and quasi-middle class [9]. However, the pain point of the knowledge payment industry's rapid development lies in how to attract users for continuous usage, as knowledge is a special type of product.

Domestic scholars have summarized factors influencing knowledge payment user behavior from different perspectives. Some scholars argue that individual needs, information quality, individual cognition, subjective norms, facilitating conditions, and substitutes affect user behavior, with economic factors having the weakest impact [10]. Others propose that personal knowledge management needs, performance expectancy, perceived enjoyment, and social influence have significant effects on users [11]. Overall, user behavior influencing factors are related to three aspects: users themselves, the external environment, and the providing platform.

With the strong development of platforms like Weibo and WeChat, social in-

teraction has become an important feature of the new media era. Domestic researchers have also conceptualized knowledge behavior influenced by social environments and relationships as "social knowledge behavior" [12]. Utilizing social networks for knowledge payment services represents an underdeveloped area in the knowledge payment industry, and the Fluent Reading team is a pioneer in this new field, fully leveraging social media dissemination in social circles to achieve user acquisition. However, whether the pioneer's attempt meets the knowledge payment industry's expectations for user growth requires further research and discussion. This study takes Fluent Reading's social knowledge behavior of social circle check-ins as an entry point, combining UTAUT theory and relevant theories on continuous usage to explore the entire knowledge payment user usage behavior mechanism.

3. Research Model and Hypothesis Development

The UTAUT model is specifically designed to explain users' acceptance and usage behavior of computer information systems and offers high explanatory power. Current domestic research mainly follows two directions: (1) introducing the theoretical model, comparing it with similar theories, and discussing the latest developments in UTAUT and other technology acceptance theories; and (2) conducting empirical research based on UTAUT to reveal the influencing factors and mechanisms in the acceptance and adoption processes of new technology products or services such as mobile learning, mobile payment, online group buying, mobile travel APPs, and mobile libraries [13]. Knowledge payment APPs are a learning method emerging with information technology and mobile internet, and the mechanism of users' acceptance and adoption of this new learning method is a typical technology acceptance issue.

Based on the UTAUT model, combined with previous research conclusions, characteristics of knowledge payment APPs, and features of college student behavior, this study adjusts the variables in the existing model and constructs the research model (see Figure 2 [Figure 2: see original paper]) and proposes research hypotheses.

The three variables of performance expectancy, effort expectancy, and social influence are derived from the UTAUT model. Performance expectancy refers to the degree to which users believe that using an information technology system can improve their learning and work efficiency. Effort expectancy refers to the degree of ease associated with using an information technology system. Research based on the UTAUT model exploring factors influencing users' behavior in mobile application stores found that both performance expectancy and effort expectancy have significant positive effects on users' purchase intention [14]. Social influence refers to the degree to which users perceive that important others believe they should use an information technology system. Studies have found that social influence positively affects users' willingness to participate in online communities and their actual behavior [13]. In the UTAUT model, higher performance expectancy, effort expectancy, and social influence regarding

an information technology system lead to stronger behavioral intention. In this study context, the meanings of these three variables are: the stronger users' belief that Fluent Reading APP can improve their learning efficiency, the more convenient and user-friendly they find Fluent Reading APP, and the greater the recommendation influence they receive from people around them, the stronger their intention to use Fluent Reading.

This study also introduces a new variable: expectation confirmation degree. Expectation Confirmation Theory is an important theory for studying consumers' repurchase intention. It posits that repeat purchase behavior of goods and services is based on consumers' satisfaction evaluation, which results from comparing pre-purchase expectations with post-purchase performance to determine whether consumers are satisfied with the product or service, and satisfaction serves as a reference for consumers' subsequent purchases and usage [15]. Scholar A. Bhattacherjee proposed the Expectation Confirmation Model based on this theory, introducing expectation confirmation degree, perceived usefulness, satisfaction, and continuous usage intention as core variables [16]. This model has been widely applied in research on users' continuous usage intention in information systems. As an emerging industry, the sustainable development of knowledge payment fundamentally depends on users' continuous purchase and usage, while users' satisfaction with their initial use of an information technology system directly affects their subsequent usage behavior. Therefore, this study introduces expectation confirmation degree, a core variable from the Expectation Confirmation Model, as an indicator to measure user satisfaction and continuous usage willingness, which directly affects user behavior. In this study, the result of users' comparison between pre-purchase expectations and post-purchase performance of Fluent Reading APP represents the expectation confirmation degree, which serves as an indicator to measure users' continuous usage behavior of Fluent Reading.

Additionally, the constructed model removes the facilitating conditions construct and the four moderating variables of age, gender, experience, and voluntariness from the original UTAUT model. Facilitating conditions refer to the degree to which users believe that objective conditions (technology, relevant organizations, etc.) can support their usage. In this study, the popularity of smartphones, development of mobile internet, improvement of mobile payment methods, and rise of professional content creators are all factors facilitating the use of knowledge payment APPs. As a young group, college students have minimal internal differences in their perception and acceptance of these objective conditions, and they basically all have experience using information technology systems. Moreover, their use of Fluent Reading is voluntary. According to previous research, facilitating conditions have not shown a significant direct impact on user participation behavior [12]; therefore, this study does not consider the effect of facilitating conditions.

Regarding the moderating variables in the UTAUT model (age, gender, experience, and voluntariness), previous research results show that: for the effect

of performance expectancy on behavioral intention, only gender is significant (males more than females), and when age is added, young males are more significant than other groups; for the effect of effort expectancy on behavioral intention, inexperienced females are more significant than males; for the effect of social influence on behavioral intention, inexperienced older females are more significant than males, especially in non-voluntary situations [17]. The subjects of this study are college students who have used Fluent Reading, with minimal differences in age and experience, basically all having experience using information technology systems, and their use of Fluent Reading is voluntary. Therefore, this study does not consider the moderating effects of these variables on model paths.

Based on the research model and discussion of relevant variables, this study proposes the following hypotheses:

H1: Performance expectancy has a positive effect on college students' behavioral intention to use Fluent Reading.
H2: Effort expectancy has a positive effect on college students' behavioral intention to use Fluent Reading.
H3: Social influence has a positive effect on college students' behavioral intention to use Fluent Reading.
H4: Expectation confirmation degree has a positive effect on college students' usage behavior of Fluent Reading.
H5: Behavioral intention has a positive effect on college students' usage behavior of Fluent Reading.

4.1 Research Subjects and Design

This study employs semi-structured interviews and questionnaire surveys, targeting college students who have used Fluent Reading. Before designing the questionnaire, semi-structured interviews were conducted with 10 college student users from different universities. Based on the interview results and UTAUT theory literature, the questionnaire was designed. Since the application of the UTAUT model is relatively mature internationally, this study adopted existing scales for measuring performance expectancy, effort expectancy, social influence, expectation confirmation degree, behavioral intention, and usage behavior to ensure reliability and validity. After initial completion, a pre-test was conducted at Zhengzhou University to refine the questionnaire content. The study used online electronic questionnaires, distributed from April 22 to May 10, 2019. A total of 753 questionnaires were distributed, yielding 315 valid questionnaires that met the criteria of "having used Fluent Reading," "being a college student," and being completely filled out.

To ensure the reliability and validity of the measurement scales, most measurement items were adapted from existing literature (see Table 1). The questionnaire used a Likert scale for variable measurement (1 = completely disagree, 5 = completely agree). Reliability testing of all measurement variables showed a

Cronbach's alpha coefficient of 0.948, with internal consistency for each variable ranging from 0.759 to 0.931, indicating excellent internal reliability.

Table 1 Variables, Measurement Items, Sources, and Reliability Tests

Variable	Measurement Items	Source	Cronbach's α
Performance Expectancy	1. Using Fluent Reading can help improve the quality and efficiency of my learning2. Using Fluent Reading can help enhance my learning ability3. Using Fluent Reading can help expand my social circle	V. Venkatesh, et al. (2003) [7]	0.931
Effort Expectancy	1. Fluent Reading has a simple interface design that is easy to operate2. The teaching format of Fluent Reading makes me feel it is easy to learn3. The learning process of Fluent Reading is very simple	V. Venkatesh, et al. (2003) [7]	0.759
Social Influence	1. If friends recommend Fluent Reading to me, I will try to use it2. Seeing check-in posts flooding my social circle will prompt me to use Fluent Reading3. Using Fluent Reading will give me a sense of achievement4. The general environment of English learning prompts me to use Fluent Reading	V. Venkatesh, et al. (2003) [7]	0.847

Variable	Measurement Items	Source	Cronbach's α
Expectation Confirmation Degree	1. The experience I gained during using Fluent Reading exceeded my expectations2. The service quality provided by Fluent Reading exceeded my expectations3. Most of my expectations for Fluent Reading were met during usage	Y. Yi (1990) [18], A. Bhattacherjee (2001) [16]	0.889
Behavioral Intention	1. I am willing to use Fluent Reading daily2. I am willing to check in daily3. If the usage effect is good, I am willing to continue using Fluent Reading	V. Venkatesh, et al. (2003) [7]	0.901
Usage Behavior	1. I frequently use Fluent Reading2. I often follow community dynamics or participate in community discussions3. I take notes while learning4. I recommend Fluent Reading to friends	V. Venkatesh, et al. (2003) [7]	0.879

4.2 Data Analysis

Among the 315 respondents, female users far outnumbered males, accounting for 73.65%. In terms of education, undergraduates were the majority at 92.7%, with relatively few junior college students and graduate students. Geographically, the sample came from 25 provinces and municipalities including Henan, Beijing, and Sichuan. Since this study was conducted at Zhengzhou University, the largest proportion of respondents (47.62%) came from Henan Province. Before using Fluent Reading, 55.87% of respondents had used knowledge payment products.

SPSS 22.0 was used to measure the variables. The means of performance expectancy (3.50), effort expectancy (3.71), and social influence (3.55) were relatively high. Bivariate correlation analysis revealed that all variables were significantly correlated (see Table 2).

Table 2 Pearson Correlation Coefficients and Descriptive Statistics of Core Variables

Variable	1	2	3	4	5	6	Mean	SD
1. Performance Expectancy	1						3.50	0.89
2. Effort Expectancy	.596**	1					3.71	0.82
3. Social Influence	.554**	.710**	1				3.55	0.84
4. Behavioral Intention	.494**	.575**	.648**	1			3.27	0.95
5. Expectation Confirmation Degree	.599**	.579**	.559**	.632**	1		3.27	0.91
6. Usage Behavior	.667**	.592**	.656**	.691**	.756**	1	3.12	0.88

Note: ** $p < 0.01$

4.3 Model Testing and Revision

This study used the multiple stepwise linear regression method in SPSS, which is commonly used to explore causal relationships between two or more variables and is widely applied. Based on the proposed model, stepwise regression analysis was conducted with behavioral intention and usage behavior as dependent variables to determine whether the regression model fit met the criteria and to further test the hypotheses.

First, with behavioral intention as the dependent variable and performance expectancy, effort expectancy, and social influence as independent variables, regression analysis was performed. According to the results, the model with the highest fit (Model 3) was selected (see Table 3). Its adjusted R-squared was 0.440, tolerance ranged from 0.437 to 0.610, and the VIF value was at most 2.289, indicating acceptable model fit. The analysis results showed the relationship between behavioral intention and each variable as: Behavioral Intention = 0.467 × Social Influence + 0.219 × Effort Expectancy + 0.174 × Performance Expectancy.

Table 3 Coefficients a

Model	Variable	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
3	(Constant)	0.610		3.201	0.002
	Social Influence	0.467	0.412	8.123	0.000
	Effort Expectancy	0.219	0.201	3.891	0.000
	Performance Expectancy	0.174	0.162	3.201	0.002

Note: a. Dependent variable: Behavioral Intention

Subsequently, with usage behavior as the dependent variable and performance expectancy, effort expectancy, social influence, behavioral intention, and expectation confirmation degree as independent variables, multiple regression analysis was conducted. Similarly, the model with the highest fit (Model 3) was selected (see Table 4). Its adjusted R-squared was 0.648, tolerance ranged from 0.431

to 0.571, and the VIF value was at most 2.322, indicating acceptable model fit. This model excluded the variables that could not be introduced into the regression equation—social influence and effort expectancy—and added a path from performance expectancy to usage behavior compared to the initial model (see the revised model in Figure 3 [Figure 3: see original paper]). The relationship between variables was: Usage Behavior = 0.430 × Expectation Confirmation Degree + 0.317 × Behavioral Intention + 0.170 × Performance Expectancy.

Table 4 Coefficients a

Model	Variable	Unstandardized Coefficients	Standardized Coefficients	t
3	(Constant)	0.317		1.892
	Expectation Confirmation Degree	0.430	0.443	9.234
	Behavioral Intention	0.317	0.311	6.512
	Performance Expectancy	0.170	0.172	3.567

Note: a. Dependent variable: Usage Behavior

Figure 3 Revised Research Model

5.1 Research Results

The results indicate that hypotheses H1, H2, H3, H4, and H5 are all supported. Additionally, a new path was added: performance expectancy directly affects usage behavior. According to the findings, college students' usage behavior of Fluent Reading is influenced by multiple factors. Among them, social influence, effort expectancy, and performance expectancy indirectly affect usage behavior through behavioral intention, with decreasing influence magnitude. Meanwhile, expectation confirmation degree, behavioral intention, and performance expectancy have relatively strong direct effects, also with decreasing influence magnitude.

5.2 Discussion and Recommendations

Fluent Reading, as a knowledge payment product, achieved viral spread among college students through its check-in refund mechanism. The study shows that expectation confirmation degree and social influence have the greatest impact on college students' usage intention and behavior. Therefore, knowledge payment platforms should focus on improving users' expectation confirmation values and leveraging social influence to stimulate usage intention and promote usage behavior.

5.2.1 Knowledge Payment Platforms Should Prioritize Media Image Building While Creating High-Quality Content

The results show that expectation confirmation degree is the most important factor affecting usage behavior. The comparison between users' pre-purchase expectations and post-purchase performance—the expectation confirmation value—reflects whether the product meets users' expectations and their satisfaction level, which directly influences usage behavior. Especially for "first-order free" products like Fluent Reading, if the expectation confirmation value is too low during the free trial period, it is highly likely to reduce users' enthusiasm and may even lead to user abandonment and loss.

The results indicate that college students' expectation confirmation degree for Fluent Reading is not high (mean = 3.27), suggesting that Fluent Reading's services do not meet their expectations. On one hand, English learning is a long-term cumulative process that cannot be rapidly improved in the short term. Fluent Reading uses fragmented time to explain knowledge to users, making it easy for users to become distracted and difficult to achieve the immersive effect of traditional English learning. Additionally, the platform lacks mechanisms to 督促 users to review and consolidate knowledge, leading to superficial learning without genuine knowledge accumulation, ultimately making "listening to audio" a formalistic task. On the other hand, while the check-in refund mechanism successfully attracts new users, it may also cause resentment among some users. As a platform for impression management, every post on social media is carefully crafted and selected. Fluent Reading's requirement to force users to check in on social media and make it "visible to all" can damage users' social media image to some extent, and frequent check-ins may cause annoyance to others, even leading to users being blocked. This significantly reduces users' experience during product usage, affecting their satisfaction with Fluent Reading and subsequently their usage behavior.

Based on this, knowledge payment platforms should strategically stimulate users' pre-purchase expectations and improve post-purchase performance. First, conduct precise promotion targeting user needs. Data analysis shows that college students' performance expectancy for Fluent Reading focuses on improving learning quality and efficiency (mean = 3.50) and enhancing learning ability (mean = 3.42). Therefore, platforms should highlight the professionalism and practicality of their products in English learning during promotion to stimulate potential users' usage intention. Second, create a positive media image and enhance user trust through word-of-mouth marketing and social media marketing strategies. Finally, continuously improve product quality and optimize user experience to enhance expectation confirmation degree, thereby increasing user loyalty and stickiness. As an information product, knowledge payment products' reputation depends on user evaluations, which in turn depend on expectation confirmation degree. Therefore, creating high-quality content is key to shaping product media image.

Additionally, although performance expectancy and effort expectancy did not show significant effects on usage intention and behavior, knowledge payment platforms still need to strengthen their quality and comprehensively consider relevant influencing factors based on expectation confirmation degree and social influence.

5.2.2 Reasonably and Effectively Stimulate and Utilize Users' Network Relationships to Maintain User Stickiness and Conduct Brand Communication and Marketing

The results show that social factors are the most important influence on user behavioral intention, meaning that external factors such as friends' recommendations and social circle flooding have greater impact than internal factors like the desire to learn English. Fluent Reading APP's mechanism of incentivizing users to check in on social media for tuition refund is essentially a marketing strategy that uses users' social relationship networks for product promotion. College students' social circles contain many potential users of Fluent Reading, and the increasing number of people joining check-ins creates an opinion climate that promotes potential users' usage intention. However, data shows that Fluent Reading's strategy is not entirely successful (item mean = 2.52). Although Fluent Reading achieved viral growth on social media platforms through the check-in mechanism, it has not truly mobilized users' enthusiasm for using social relationships for dissemination, and this social 传播 weakens or disappears once users complete the check-in task.

In the social media era, platforms like WeChat and Weibo have become important channels for information dissemination. Knowledge payment platforms should fully explore users' social relationship networks for precision marketing and viral marketing. Scholars have also pointed out that the future direction of online knowledge payment is the integration of content, social interaction, and scenarios, promoting knowledge payment platforms and commercial monetization through social relationships [19]. Additionally, communities built around knowledge payment products can enhance user experience and increase user stickiness.

First, knowledge payment platforms can set up social sections within the product, allowing users to check in, interact, and share original knowledge within the product, helping users establish new relationship chains and creating a level system based on usage duration to enhance user loyalty and stickiness. Second, promote interaction between users and the platform and among users themselves. For example, establish learning communities that encourage members to share knowledge, raise questions, and interact with instructors; operate official Weibo accounts with personified images to maintain close interaction with users; establish WeChat public accounts to regularly send high-quality content that stimulates user forwarding and sharing. Finally, provide users with personalized and rewarding sharing mechanisms, such as allowing users to create their own check-in content or offering points and account level upgrades for sharing

to social media accounts.

6. Research Limitations and Future Directions

Based on the UTAUT model and introducing the important indicator of expectation confirmation degree, this study explores college students' usage behavior mechanisms when using knowledge payment products, taking Fluent Reading as an example. The limitations of this study are as follows: First, non-probability sampling was used, with respondents primarily from Henan Province, and the survey area did not cover the entire country. Additionally, some users had not used the product for a long time, so the comprehensiveness of the collected data needs improvement. Second, since knowledge products are difficult to evaluate with objective indicators, the measurement of expectation confirmation degree may involve respondents' cognitive biases. Finally, the researchers believe that the social functions of knowledge payment products, such as social circle check-ins, may also affect user psychology to some extent, and whether herd mentality and group pressure exist requires further investigation.

Future researchers can conduct in-depth studies from these aspects to further improve and expand the model to better explain knowledge payment users' usage behavior and mechanisms.

References

[1] Zou Bohan, Luo Hao. Knowledge Payment—A Knowledge Dissemination Model with Openness, Sharing, and Payment as Its Core [J]. New Media Research, 2017(11): 110-112, 132.
[2] Informatization and Industrial Development Department. State Information Center Releases "Annual Report on China's Sharing Economy Development (2019)" [EB/OL]. [2019-06-07]. http://www.sic.gov.cn/News/568/9906.htm.
[3] DAVIS F D. Perceived usefulness, perceived ease of use and user acceptance of information technology [J]. MIS quarterly, 1989, 13(3): 319-340.
[4] Sun Jianjun, Cheng Ying, Ke Qing. Research Progress of TAM Model—Model Evolution [J]. Information Science, 2007(8): 1121-1127.
[5] Wen Jiayuan. Rogers' "Innovation Diffusion" Theory [J]. Science and Technology Communication, 2015, 7(13): 167-168.
[6] AJZEN I, FISHBEIN M. Understanding attitudes and predicting social behaviour [M]. Englewood Cliffs: Prentice-Hall, 1980: 20-35.
[7] VENKATESH V, MORRIS M G, DAVIS G B, et al. User acceptance of information technology: toward a unified view [J]. MIS quarterly, 2003, 27(3): 425-478.
[8] Li Xia, Fan Zhiping, Feng Bo. Concepts, Characteristics, and Models of Knowledge Services [J]. Information Science, 2007(10): 1584-1587.
[9] Liu Lei. Analysis of Influencing Factors of Knowledge Payment Behavior and Exploration of Development Countermeasures [J]. China Management Informationization, 2017(21): 149-151.

[10] Zhang Shuai, Wang Wentao, Li Jing. Research on Influencing Factors of Users' Online Knowledge Payment Behavior [J]. Library and Information Service, 2017, 61(10): 94-100.
[11] Quan Zhenhua, Xie Qing. Empirical Study on User Behavior of Knowledge Payment Products: Taking Dedao APP as an Example [J]. Advertising Panorama (Theory Edition), 2017(4): 75-83.
[12] Zhang Lei, Zhang Min, Zhang Yan. Systematic Review of User Social Knowledge Behavior Research [J]. Information Studies: Theory & Application, 2019(8): 144-152.
[13] Zhang Hongming, Liu Chao, Feng Wenhong, et al. Research on Online Community Participation Behavior Based on the Unified Theory of Acceptance and Use of Technology: Taking Douban as an Example [J]. International Press, 2015(6): 59-73.
[14] Sun Huijing. Research on Influencing Factors of Mobile Application Store User Behavior Based on UTAUT [D]. Beijing: Beijing University of Posts and Telecommunications, 2014.
[15] OLIVER R L. A cognitive model of the antecedents and consequences of satisfaction decisions [J]. Journal of marketing research, 1980, 17(4): 460-469.
[16] BHATTACHERJEE A. Understanding information systems continuance: an expectation-confirmation model [J]. MIS quarterly, 2001, 25(3): 351-370.
[17] VENKATESH V, MORRIS M G, DAVIS G B, et al. User acceptance of information technology: toward a unified view [J]. MIS quarterly, 2003, 27(3): 425-478.
[18] Yi Y. A critical review of consumer satisfaction [M]// ZEITHMAL V A. Review of Marketing. Chicago: American Marketing Association, 1990: 68-123.
[19] Yu Guoming, Guo Chaokai. Online Knowledge Payment: Main Types, Morphological Structures, and Development Models [J]. Editors' Journal, 2017(5): 6-11.

Author Contributions

Zhang Jiaying: Determined the research topic and 思路, proposed model construction and hypotheses, wrote the research methods, results, and discussion sections, and revised the paper.
Yuan Yuqin: Determined the research topic and 思路, constructed the model, conducted data analysis, wrote the introduction and literature review sections, and revised the paper.

Note: Figure translations are in progress. See original paper for figures.