Volume: 16, Issue: 1
Page: 285-299
2022

International Journal of Science and Business

Journal homepage: ijsab.com/ijsb

Analysis of Factors Affecting Knowledge Payment: A Case Study on Chinese Higher Vocational Students

Zhang Ling

Abstract

In China, knowledge payment is rapidly emerging, but it also faces huge challenges. There are more than 12 million higher vocational students in China, and they are an important customer group for knowledge payment. How the knowledge payment platform retains Chinese vocational students has become one of the research hotspots. This paper draws on the research results of previous scholars in the fields of PV (Perceived value), FE (Immersion experience), and PU (Perceived Usefulness) in the fields of consumption and online learning, and attempts to explore the influencing factor model of higher vocational students' knowledge payment. Taking two grades of students from City College of Huizhou as the subject of investigation, this paper explores the influence of perceived value, perceived usefulness, and immersion experience on payment behavior, and explores the possible mediating effect of immersion experience. This study adopts the method of quantitative analysis, based on SPSS25.0, carries out canonical correlation analysis, multiple regression analysis, and mediation effect analysis on 910 valid questionnaires. The study found that perceived value and perceived usefulness promote each other, PV has a positive impact on PB, PU has a positive impact on PB, FE has a positive impact on PB, and FE has a positive impact on PV and PB. There is a mediating role in the relationship between behaviors, and perceived value has a mediating role in the relationship between PU and PB. It provides theoretical and practical reference for knowledge payment platform managers and knowledge product producers.

IJSB
Accepted 03 October 2022
Published 05 October 2022
DOI: 10.5281/zenodo.7145889

Keywords: *Chinese Vocational Students, Perceived Value, Perceived Usefulness, Flow Experience, Knowledge Payment Behavior.*

About Author (s)

Zhang Ling , Asia Metropolitan University, Malaysia.

1.Introduction

In China, the paid knowledge industry is growing rapidly. The market size is 39.2 billion yuan in 2020 and will grow to 67.5 billion yuan in 2021.The development of China's Internet has provided an important development foundation for knowledge payment. With the continuous growth of the online audio-visual industry, knowledge payment will also enjoy dividends to a large extent, and the industry scale will continue to expand. Residents' consumption has been continuously upgraded, and their needs in terms of spirituality and self-skills have gradually emerged. More and more consumers are willing to consume knowledge products to improve their personal hobbies and workplace skills. There are a large number of college students in China, including more than 12 million students at the junior college level. They are no longer satisfied with the knowledge in books, they are more willing to find the knowledge they need online (Zhang Chenxue, 2019). College students are the paid knowledge industry, and academia has also become a group to focus on. Scholars have launched research on users' online knowledge payment behavior, but there is a lack of research specifically on Chinese higher vocational students. At present, many scholars have discussed the business model, development status and future trends of knowledge payment, but there are relatively few studies on the payment behavior of students in higher vocational colleges. In 1985, Michael.Porter pointed out that creating value for customers is an important competitive advantage of the company (Porter, 1985). Competitive advantage focused on customer value (Woodruff, 1997). To this end, the first question is raised, the question of "creating value" for Chinese higher vocational students by the knowledge payment platform.

Problem statement 1 ：The relationship between PV and PB

The concept of reviewing performance is to better unlock usefulness (Benbasat and Barki, 2007). PU is the core variable of the technology acceptance model, which is defined by Davis (1989) as " The extent to which people feel that job performance can be improved through information systems". For this, the second question arises. "Efficiency and Effectiveness" of Chinese Higher Vocational Students' Use of Knowledge Payment Platforms.

Problem Statement 2: The relationship between PU and PB

PU will significantly and positively affect PV (Li Yazheng, 2016). PU significantly affects PV, and PU and PV significantly affect users' willingness to continue using (Bai Yu, 2017). Perceived usefulness and perceived cost are direct factors of perceived value (Fang Aihua et al., 2018). College students' willingness to pay is affected by factors such as perceived usefulness, perceived value, perceived trust, course evaluation word-of-mouth, and course audio-visual experience (Xu Yanan et al., 2018). The knowledge payment platform has multiple factors such as mobile Internet, online learning, and consumption, and can learn from the previous research results of scholars on knowledge payment, e-commerce, social networking, online learning, and technology adoption. This leads to the third question, what impact does perceived usefulness have on perceived value in the context of knowledge payment?

Problem Statement 3: The relationship between PU and PV in the context of PB

Immersive experience has been widely used in online learning, online shopping, virtual reality and other fields, and its effect has been verified. Immersive experience has become one of the main theories to explain online consumer shopping behavior and is an important part of consumer behavior. Some literatures show that immersive experience affects payment behavior by exerting a mediating effect. Immersive experience is the mediating variable of visual attractiveness and perceived usefulness affecting consumers' purchase intention (Kühn et al., 2018). Immersive experience through smart shopping experience indirectly affects consumers' purchase intention (Wang Xuhui et al., 2022). Immersive experience directly

affects consumers' willingness to pay through the mediating effect of perceived value (Canarslan et al., 2022). To this end, the fourth question is raised, the "immersion experience" of Chinese higher vocational students on the knowledge payment platform.

Problem Statement 4: The mediating effect of immersive experience

Based on this, in the context of knowledge payment, this study takes the students of China's regional higher vocational colleges – City College of Huizhou as the research object, and through a combination of theoretical analysis and empirical analysis, an in-depth study of Chinese higher vocational students in the context of knowledge payment The mechanism of action among perceived usefulness, perceived value and pay behavior performance. To this end, the research objectives are as follows:

Research Objective 1: To tease out the relationship between PV, PV and PB.

Research objective 2: To tease out the relationship between PV, PV and FE.

Research objective 3: To explore the mechanism of PV on PB with FE as the mediating variable.

Research objective 4: Explore the mechanism of PU on PB with FE as a mediating variable.

2.Literature Review

2.1 Payment Behaviors

2.1.1 Definition

A variety of factors interact to lead to willingness to pay, and there are differences in the influencing factors of willingness to pay in different scenarios.Because of this, how to ensure that vocational students continue to spend time, money and energy to use paid knowledge products has become an emerging frontier hotspot (Huang Mengmei et al., 2021). In the context of knowledge payment in China, the payment behavior refers to the user behavior of paying for online knowledge services and products, and is the sum of the knowledge payment decision-making behavior in the pre-consumption period, the knowledge transaction behavior in the mid-consumption period, and the knowledge internalization behavior in the post-consumption period. It covers multiple factors such as online consumption, online learning, and continuous use. In this study, the payment behavior is divided into two dimensions, namely continuous use and purchase.

2.1.2 Previous Research

In terms of research theories, the most used theory is perceived value theory, followed by social capital theory, social cognition theory, and planned behavior theory. Factors of concern include user factors, business factors, and product factors. Factors such as price were used as moderator variables. The effects of variables such as PV, PU, and perceived ease of use are verified. For example, Y. Wang (2004) found that convenience, necessity, added value, and service quality significantly affect payment behavior. Zhao Baoguo, etc. (2017) Perceived usefulness significantly affects payment behavior. (2018) found that professionalism and fun significantly affect payment behavior. Previous studies could not reach a consensus on the influencing factors of knowledge payment behavior, and there were different or opposite views. Some literatures believe that there are certain gender differences in the willingness and behavior of college students to pay for knowledge, and the scores of girls in willingness to pay for knowledge and behavior are higher than those of boys (Lu Ying et al., 2021). Variables such as educational level and residence have an impact on online knowledge payment behavior (Du Zhitao et al., 2018). In addition, Xue Yunjian et al. constructed a model of users' willingness to use paid knowledge apps, but found that immersive experience had no significant impact on continued use willingness (Xue Yunjian et al., 2021). Li Ying et al. found that the stronger the immersive experience generated by users, the stronger their willingness to continue to

participate in knowledge sharing (Li Ying et al., 2019). Xu Xuefei et al. found that immersive experience has a significant impact on continued use intention (Xu Xueqi et al., 2020).

2.2 Perceived Value

2.2.1 Definition

In 1985, Michael.Porter pointed out that creating value for customers is an important competitive advantage of the company (Porter, 1985). Slater (1997) to create value for customers is an important reason for the existence of the formula.Competitive advantage focused on customer value (Woodruff, 1997). Therefore, the knowledge payment platform is an important task for Chinese higher vocational students to create value, establish advantages, and maintain advantages.Customer value refers to the customer's overall evaluation of the utility of a product or service based on its perceived benefits and costs, derived from shopping rather than perceived sacrifice (Zeithaml et al., 1990). Customers' value judgments are determined within the constraints of specific use cases, and these judgments change with use cases, over time, and specific "triggering" situations (Woodruff, 1997). Combined with existing research and case analysis, in the context of knowledge payment in China, perceived value can define the overall evaluation of content value, functional value, social support, and price value when using a knowledge payment platform for a period of time.

2.2.2 Previous Research

Many literatures show that PV significantly affects payment behavior. Gan & Wang divided PV into three dimensions: functional value, hedonic value and social value, and empirically found that functional value, hedonic value and social value significantly affect purchasing behavior, and the most important factor is functional value (Gan & Wang, 2017) . Perceived value significantly affects purchase intention (Peng et al., 2019). PV has a significant impact on purchase intention (Konuk, 2018). Watanabe et al divided PV into functional value, economic value, social value and emotional value, and empirically found that PV is the most important factor (Watanabe et al., 2020). Fang Aihua et al. (2018) confirmed that PV is a key factor affecting willingness to pay, which is consistent with what Mohammed & Al-Swidi (2019) found. In addition, some literature shows that PV needs to rely on other variables to influence payment behavior. Zhou Tao et al. found that the information quality of the platform affects perceived value, and service knowledge also affects perceived value, which in turn affects users' willingness to pay (Zhou Tao et al., 2019). Specific to the dimension of perceived value, some scholars divide perceived value into four dimensions, including quality value, emotional value, price value and social value (Sweeney & Soutar, 2001). Some scholars divide perceived value into five dimensions, including cognitive value, conditional value, social value, affective value and functional value (Sheth et al., 1991). Zhao Feifei et al. divided perceived value into two dimensions: perceived loss and perceived gain (Zhao Feifei et al., 2019). Zhu Jiani et al. believe that perceived value can be composed of social value, price value, content value, interaction value and interface design value (Zhu Jiani et al., 2019).

2.3 Perceived Usefulness

2.3.1 Definition

A literature review of the Technology Acceptance Model (TAM) The study of users' acceptance of technology is considered to be one of the most mature research areas in contemporary information systems. Many theoretical models have been produced in this field, and TAM is one of the most representative ones. The TAM model is widely used to explore people's acceptance of various information technologies, and only by accepting new technologies can they generate continuous use willingness and thus produce sticky behaviors. There is a lot of research on TAM, including modification of TAM, extension of TAM, and application to many fields (Al-

Emran et al., 2021). This study considers that, in the context of paying for knowledge, it refers to the degree to which a vocational student believes that a paid-for-knowledge platform will help them achieve their goals, believing that using a paid-for-knowledge platform will improve his/her performance in the course.

2.3.2 Previous Research

Bhattacherjee pointed out that PU is the most critical factor affecting satisfaction and continuous use (Bhattacherjee, 2001; Bhattacherjee et al., 2008). In many fields, multiple dimensions of technology acceptance are explored as TAM expands and develops. In recent years, a lot of research has been done on the driving factors, influence effects, model extension, etc. of PU. Perceived usefulness has a significant impact on e-purchase intent (Moslehpour et al., 2018). Perceived usefulness significantly affects online purchasing behavior (Iriani et al., 2020). Perceived usefulness significantly affects purchase intention (Kripesh et al., 2020). PV significantly affects online shopping intent (N.Ha, 2020).

2.4 Flow Experience

2.4.1 Definition

Csikszentmihalyi (1975) argues immersion experience is a positive and positive psychological experience, it will give the individual a great sense of pleasure when participating in the activity, so as to encourage the individual to repeat the same activity without getting bored.Without immersion in human experience, "life is meaningless" (Larson et al., 1982). With the development of computer technology, the theory of immersion extends to the discussion of human-computer interaction. At this time, immersion experience also means that the participants enter a common experience mode, their consciousness is concentrated in a small range, and other irrelevant perceptions and thinking are ignored. Filtered to respond only to specific goals and explicit feedback, and to develop a sense of control over the environment. (Moneta et al., 1996). The immersion experience of this research will adopt two dimensions of focus and enjoyment. It is believed that in the context of knowledge payment, immersion experience refers to the overall state when the user is completely immersed in the learning and experience of knowledge and ignores the existence of other affairs or things.

2.4.2 Previous Research

Koufaris suggests that immersion is a metric to consider when measuring online consumer experience. Immersive experience significantly affects online shopping behavior (Smith et al., 2004). Kim et al found that immersive experience significantly affects online purchase intent (Kim et al., 2014). Immersive experience has a significant positive impact on impulsive consumption willingness (Gong Xiaoxiao et al., 2019). Li Ying et al. found that immersive experience significantly affects the sharing behavior of users in knowledge communities (Li Ying et al., 2019). Immersive experience significantly affects online shopping behavior (Shahpasandi et al., 2020). Xu Xueqi et al. found that immersive experience significantly affects continual use intention (Xu Xueqi et al., 2020). Zhang Jing also confirmed that immersive experience significantly affects purchase intention (Zhang Jing, 2020). Immersive experience significantly affects consumption intention (Wang et al., 2021). Immersive experiences directly and positively determine shopping intent (Hyun et al., 2022).

2.5 Research Framework & Hypopaper

According to the existing literature, cases and the analysis of the influence mechanism among the above variables, this study believes that both perceived value and perceived usefulness have a certain impact on payment behavior. Therefore, the theoretical model of this study is mainly as follows: In the context of knowledge payment in China, perceived value Significantly

affects payment behavior; Perceived usefulness significantly affects payment behavior; Immersive experience mediates between perceived value, perceived usefulness and payment behavior. Based on the research proposition, a theoretical model of the relationship between Chinese higher vocational students' perceived value, perceived usefulness, immersion experience and payment behavior is constructed under the background of Chinese knowledge payment. The theoretical model is shown in Figure 2-1

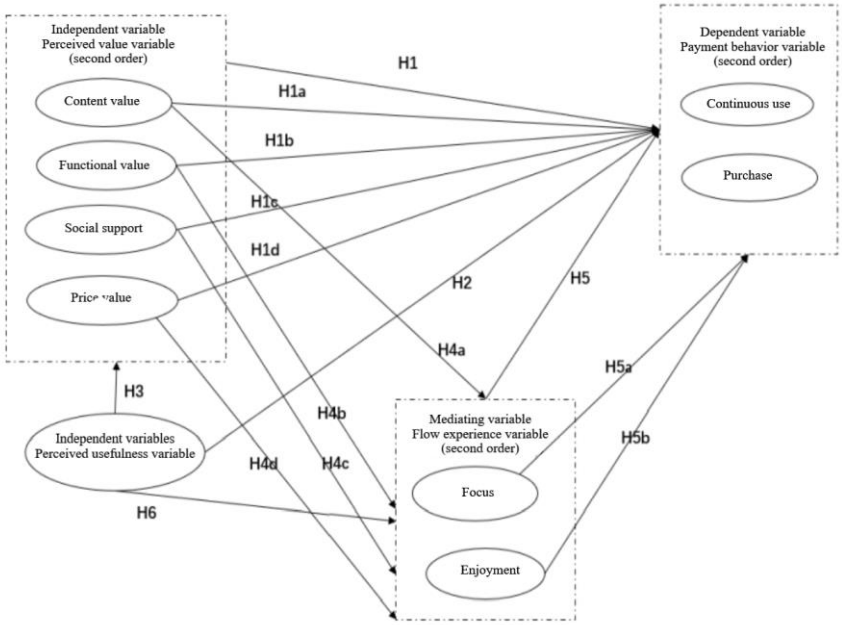

Figure 2-1 Research framework

H1: PV positively affects PB.
H1a: Content value positively affects PB.
H1b: Functional value positively affects PB.
H1c: Social support positively affects PB.
H2: PU positively affects PB.
H3: PU positively affects PV.
H4: PV positively affects FE.
H4a: Content value positively affects FE.
H4b: Functional value positively affects FE.
H4c: Social support positively affects FE.
H4d: Price value positively affects FE.
H5: FE positively affects PB.
H5a: Focus positively affects PB.
H5b: Enjoy the positive effect of PB.
H6: PU positively affects FE.
H7: PV has a mediating effect on PB through FE.
H8: PU has a mediating effect on PB through FE.

3.Methodology

3.1 Research Design

First, by combing the literature and relying on the theory of perceived value, perceived usefulness, immersion experience, and payment behavior, a research framework for Chinese higher vocational students' payment behavior is constructed. Second, relevant data are

obtained through questionnaires. Third, empirically test the research hypotheses designed in the theoretical framework.

3.2 Population

The questionnaire was distributed online, and 949 copies were recovered. Deleted 39 invalid questionnaires, 910 valid questionnaires, and 98.89% valid questionnaires. The scope of completing the questionnaire is for first-year college students and second-year college students. They have 3 months to more than 2 years of knowledge payment experience.

3.3 Instrumentation

The measurement scales used in this study are all Likert seven-point scales, which are divided into five levels of "completely disagree", "disagree", "neutral", "accord" and "completely agree" . According to the design of the scale, we express the perceived value, perceived usefulness, immersion experience and payment behavior as PV, PU, FE and PB respectively. Among them, the dimension of social value is PVV1, the dimension of functional value is PVV2, the dimension of social support is PVV3, and the dimension of price value is PVV4. The focus dimension is FEV1, and the enjoyment dimension is FEV2. The continuous use dimension is PBV1, and the purchase dimension is PBV2.

3.4 Data Collection Process

This paper uses Likert's 7-level scale to classify the items of approval. There are 7 levels in total. Where 1=fairly disagree; 2=disagree; 3=not quite agree; 4=neutral; 5=somewhat agree; 6=agree; 7=completely agree. Ethical considerations were clearly considered in the questionnaire, and items involving privacy and other issues were avoided in the design of measurement items, and it was promised that the relevant data would only be used for academic research, not for commercial use, and to use an anonymous method. Recycle data.

3.5 Data Analysis Methods

In this study, SPSS25.0 statistical software was used as the analysis tool. Using descriptive statistical analysis (such as age, grade, gender, knowledge payment experience, knowledge payment frequency, knowledge payment monthly expenditure, etc.), reliability analysis and validity analysis were carried out on the questionnaire data. Factor analysis (such as PV dimension, PU dimension, FE dimension, PB dimension) was used. Canonical correlation analysis (such as 4 dimensions of PV and 2 dimensions of PB, 2 dimensions of FE and 2 dimensions of PB) was used. Regression analysis (such as PV and PB, PU and PB, FE and PB, etc.) were used.

3.5.1 Descriptive Statistical Analysis

Descriptive statistical analysis refers to the analysis of various statistical characteristics of a certain set of indicator data, with the purpose of describing the basic situation and data distribution characteristics of the selected samples and the characteristics of the sample population they represent. In this study, the main analysis is whether the sample data of gender, grade, experience, age, etc. of the respondents meet the requirements of the study.

3.5.2 Reliability & Validity Analysis

The most commonly used Cronbach α coefficient is used in this paper. Most scholars believe that if the reliability coefficient of any scale or test is higher than 0.9, it means that the reliability of the scale or test is excellent; if the reliability coefficient is 0.8 ~0.9, it is acceptable; if the reliability coefficient is 0.7~0.8, the scale needs to be modified; if the reliability coefficient is below 0.7, the scale needs to be redesigned (Herlina, 2019; Hinton, McMurray, & Brownlow,

2014a; Janna & Herianto, 2021). This method is relatively mature, and has been deeply researched and widely used. Li Cha et al. used it to construct and test its reliability and validity of the oral English self-efficacy scale of Chinese college students (Li Cha & Sui Mingcai, 2022). Preliminary compilation and reliability analysis of the Multidimensional Social Support Scale (Zhang Meng, Zhao Menghan, Dong Jiahui, & Gong Huoliang, 2021). Zhou Tianshu et al. used for the development and verification of the customer service self-service scale (Zhou Tianshu, Ma Qinhai, Yang Yong, & Chen Haifeng, 2021). Li Li and others used it to compile and test the English reading participation scale for college students (Li Li, Yang Yiming, Hao Yi, & Wang Wenjing, 2019). The Cronbach α of PV=0.943, the Cronbach α of PB=0.931, the Cronbach α of FE =0.932, and the Cronbach α of PU is 0.891, indicating that the questionnaire data is very good. Validity analysis measures the degree to which a questionnaire or scale effectively responds to the concept being measured. Validity analysis uses factor analysis method for research, and conducts comprehensive analysis through KMO value, common degree, variance explanation rate value, factor loading coefficient value and other indicators to verify the validity level of the data. This method is relatively mature, and has been deeply studied and widely adopted, such as Fabrigar and others evaluating the application of exploratory factor analysis in psychological research (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Recommendations for current use, method development, and practice are provided by Goretzko et al. (Goretzko et al., 2021). Schreiber presents questions and recommendations for exploratory factor analysis and principal component analysis (Schreiber, 2021). Practical considerations for the use of exploratory factor analysis in educational research are presented by Beavers et al. (Beavers et al., 2013). Also, Exploratory Consumer Buying Behavior: Conceptualization and Measurement (Baumgartner & Steenkamp, 1996). For factors influencing consumer behavior and anticipated purchasing decisions in a dynamic pricing environment (Victor et al., 2018). The influence of consumers' perceived value on purchase intention of upcycled products (S. Yu & Lee, 2019). Saprikis et al reviewed exploratory research on mobile shopping consumer behavior and conducted research on variables such as perceived usefulness (Saprikis, Markos, Zarmpou, & Vlachopoulou, 2018). A study for modeling student immersion in an online learning environment (Esteban-Millat, Martínez-López, Huertas-García, Meseguer, & Rodríguez-Ardura, 2014). Cognitive, affective, and behavioral responses used to explain the impact of Facebook experiences on consumer behavioral brand engagement, including immersive experiences (Triantafillidou & Siomkos, 2018). Most scholars believe that if the KMO value is higher than 0.8, the validity is high; if the value is between 0.7 and 0.8, the validity is good; if the value is between 0.6 and 0.7, the validity is acceptable. If this value is less than 0.6, the validity is poor. Validity analysis requires passing the Bartlett test, and the corresponding P value needs to be less than 0.05. The KMO of PV= 0.949, the KMO of PV=0.922, the KMO of FE=0.939, and the KMO of PU=0.811. The questionnaire data is subject to factor analysis (KMO>0.6, and passed the Bartlett test).

4.Findings

4.1 Description of the basic situation of the sample

There were 910 valid questionnaires, of which 493 were from the third-year college and 493 were from the second-year college, accounting for 54.18% and 45.82%. There are 666 boys and 630 girls, and the proportion of males and females is 51.39% and 48.61% respectively. 232 were 19 years old and below, 294 were 20 years old, 245 were 21 years old, and 139 were 22 years old and above. The proportions are 23.41%, 32.31%, 26.92% and 10.44% respectively. 552 people spend 20 yuan or less per month, accounting for 60.66%, 178 people spend 21-50 yuan per month, accounting for 19.56%, and 112 people spend 51-100 yuan per month, accounting for 12.31%, monthly 58 people spend 100 yuan and above, accounting for 7.48%. 94 people use it once every two weeks, accounting for 10.33%, 219 people use it once a week,

accounting for 24.07%, 231 people use it twice a week, accounting for 25.38%, and people use it 3 times a week There are 85 people, accounting for 9.34%, and 281 people use it every day, accounting for 30.88%. There are 373 people with experience within 3 months, accounting for 40.99%, 218 people with experience between 3 months and 6 months, accounting for 23.96%, and 97 people with experience between 6 months and 1 year, accounting for 97 people. 10.66%, 69 people from 1 month to 2 years, accounting for 7.58%, 153 people, accounting for 16.81%, for more than 2 years. There are 647 people with a planned investment budget of less than 500 yuan, accounting for 71.10%, 121 people with a planned investment budget of 501 yuan to 1,000 yuan, accounting for 13.30%, and 84 people with a planned investment of 1,001 yuan to 2,000 yuan, accounting for 9.23%. There are 58 people above 2001, accounting for 8.27%.

4.2 Descriptive statistical analysis of variables

In the PV dimension, the average value of the content value variable is 3.803, the average value of the functional value variable is 4.328, the average value of the social support variable is 3.844, and the average value of the price value variable is 4.274. In the dimension of content value, the highest score (3.887) is [the paid knowledge products I purchased can be related to my skills training], and [the paid knowledge products I purchased are innovative/original, representing new theories, new Practice] had the lowest score (3.700). In the dimension of functional value, [I think the navigation of the knowledge payment platform is clear and clear] has the highest degree of recognition (4.430), and [I can easily use the knowledge payment platform on multiple terminals such as computers and mobile phones] score is the lowest (4.253). In the dimension of social support, the highest score is [the payment for knowledge platform will give me necessary emotional support when answering questions] (3.897), and the lowest score (3.791) is [the platform for paying for knowledge pays sufficient attention to my questions]. In the dimension of price value, the highest score is [the value of the knowledge-paid products I buy matches the price] (4.305), and the lowest score (4.243) is [compared to other ways of acquiring knowledge, the cost-effectiveness of my knowledge-paid products is higher]. In the PU dimension, in terms of perceived usefulness, Chinese higher vocational students scored the highest (4.429) with [the paid-for-knowledge platform allows me to make full use of my spare time], and the lowest with [the paid-for-knowledge platform allowed me to build professional knowledge more effectively] (4.266). In the FE dimension, Chinese higher vocational students have the highest degree of identification with [When I use the knowledge payment platform, I feel that time passes too fast] in the focus dimension (4.679). It means that the respondents are more agreeable, but have not yet reached the level of strong agreement. And with [I feel encouraged when I use a knowledge-based payment platform] the lowest (4.357). In terms of enjoyment, Chinese higher vocational students have the highest degree of identification with [When I use the knowledge payment platform, I feel able to control my learning progress] (4.243). It means that the respondents are more agreeable, but have not yet reached the level of strong agreement. And with [when I use a knowledge-based payment platform, my goals are clear] the lowest degree of identification (4.141).

4.3 Research Objective 1: Impact of PV on PB

Linear regression analysis was performed with PVV1 (content quality), functional value (PVV2), social support (PVV3), and price value (PVV4) as independent variables, and PB as the dependent variable. PVV1, PVV2, PVV3, and PVV4 could explain 0.621% of the total PB variation. The goodness of fit test showed that the F value was 371.366, which passed the test at the significant level of 0.01, indicating that the multiple regression model was well fitted. The standardized regression coefficient of PVV1 on PB was 0.148, the corresponding significance was 0.000, and the corresponding significance was less than 0.01, indicating that

PVV1 significantly affected PB, and H1a was established. The standardized regression coefficient of PVV2 on PB was 0.352, and the corresponding significance was less than 0.01, indicating that PVV1 significantly affected PB, assuming that Hlb was established. The standardized regression coefficient of PVV3 on PB was 0.373, and the corresponding significance was 0.000, which was less than 0.01, indicating that PVV3 significantly affected PB, assuming that Hlc was established. The standardized regression coefficient of PVV4 on PB was 0.100, and the corresponding significance was 0.000, which was less than 0.01, indicating that PVV4 significantly affected PB, assuming that the Hld test passed.

4.4 Research Objective 2: Impact of PU on PB

PU can explain 41.0% of the PB variation, indicating that the multiple regression model has a high degree of independent variable explanation. The goodness of fit test showed that the F value was 632.284, which passed the test at the significant level of 0.01, indicating that the multiple regression model was well fitted. It shows that PU significantly affects PB, and H2 is established.

4.5 Research Objective 3: Impact of PU on PV

PU can explain 51.7% of the total PV variation, indicating that the multiple regression model has a high degree of independent variable explanation. The goodness of fit test showed that the F value was 970.401, which passed the test at the significant level of 0.01, indicating that the multiple regression model was well fitted. It shows that PU significantly affects PV, and H3 is established.

4.6 Research objective 4: Model test of the mediating effect of FE between PV and PB

This research subdivides the FE into two dimensions: FEV1 and FEV2, and uses the valid sample data of 910 questionnaires to empirically study the mediating effect of FE between PV and PB.

4.6.1 The relationship between PV and FE

PV and PVV1, PVV2, PVV3, PVV4, FE, FEV1, FEV2, all of which showed significant significance, and the correlation coefficient values were 0.878, 0.798, 0.688, 0.677, 0.806, 0.735, 0.744, and the correlation coefficient values are all greater than 0, which means that the PV and PVV1, PVV2, PVV3, PVV4, FE, FEV1, FEV2. There is a positive correlation between the 7 items.

4.6.2 The relationship between FE and PB

FE and FEV1, FEV2, PB, PBV1, and PBV2 all showed significant among the five items, the correlation coefficient values were 0.933, 0.897, 0.721, 0.679, 0.682, and the correlation coefficients were The values are all greater than 0, which means that there is a positive correlation between FE and FEV1, FEV2, PB, PBV1, and PBV2.

4.6.3 Regression analysis of PV on FE

The regression coefficient value of PVV1 was 0.170 (t=9.977, p=0.000<0.01), indicating that PVV1 significantly affected FE, and H4a was established. The regression coefficient value of PVV2 was 0.453 (t=20.447, p=0.000<0.01), indicating that PVV2 significantly affected FE, and H4b was established. The regression coefficient value of PPV3 was 0.070 (t=4.029, p=0.000<0.01), indicating that PVV3 significantly affected FE, and H4c was established. The regression coefficient value of PVV4 was 0.174 (t=10.415, p=0.000<0.01), indicating that PVV4 significantly affected FE, and H4d was established.

4.6.4 Regression analysis of FE on PB

The regression coefficient value of FEV1 was 0.298 (t=8.971, p=0.000<0.01), indicating that FEV1 significantly affected PB, and H5a was established. The regression coefficient value of PVV2 was 0.549 (t=16.881, p=0.000<0.01), indicating that FEV2 significantly affected PB, and H5b was established.

4.6.5 Regression analysis of PV and FE on PB

Table 4-1Results of Multiple Regression Analysis of PV, FE and PB

Mediating Effect Model Test-Simplified Format			
	Model 1	Model 2	Model 3
Independent variable (PV)	0.874***	0.820***	0.522***
Intermediate variables (FE)			0.430***
R^2	0.54	0.649	0.588
Adjusted R^2	0.54	0.649	0.587
F-value	1066.297	1682.273	645.988

Note: PV independent variable; PB dependent variable; P*** means P<0.001; ** means P<0.01; * means P<0.05.

First, in Model 1, the mediating variable immersion experience has a significant regression on the perceived value of the independent variable PV. The regression model has R^2=0.365, adjusted R^2=0.362, and F=1066.297, indicating that the regression model fits well and the regression coefficient β =0.874 (P<0.0001), hypopaper H4 was validated. Secondly, in model 2, the independent variable perceived value PV has a significant regression to the dependent variable payment behavior, the regression model R^2=0.649, the adjusted R^2=0.649, 1682.273, indicating that the regression model fits well, and the regression coefficient β=0.820 (P<0.0001), hypopaper H1 was validated. Finally, in model 3, when FE is added as a mediating variable, the regression model has R^2=0.588, adjusted R^2=0.587, and F=645.988, indicating that the regression model fits well. However, the influence coefficient of the independent variable PV on PB decreased, from the coefficient β=0.874 (P<0.0001) of model 1 to β=0.522 (P<0.0001) of model 3, which indicated that FE had a significant effect on the PB. The relationship between PV and PB plays a partial mediating role. The ratio of the mediating effect to the total effect was 40.343%, so H7 was partially verified.

4.7 Research objective 5: Model test of the mediating effect of FE between PU and PB

In order to verify the mediating effect of FE between PU and PB, it is necessary to analyze the relationship between PU and FE, the relationship between FE and PB, and the relationship between PU and PB.

4.7.1 Correlation between PU and FE

The correlation coefficient between PU and FE=0.827, that is, PU and FE are significantly correlated; the correlation coefficients between PU and PBV1 and PBV2 are 0.761 and 0.754, respectively, that is, PU is significantly correlated with PBV1 and PBV2.

4.7.2 Regression analysis of PU on FE

PU was able to explain 68.4% of the change in FE. The regression coefficient value of PU is 0.772 (t=44.371, p=0.000<0.01), indicating that PU significantly affects FE, and H6 is established.

4.7.3 Regression analysis of PU and FE on PB

Table 4-2 Multiple regression analysis of PU,FE, and PB

	PB	FE	PB
Independent variable and mediating variable (PU)	0.699**	0.772***	0.152***
FE			0.708***
R^2	0.41	0.684	0.526
Adjusted R^2	0.41	0.684	0.525
F-value	632.284, p=0.000	1968.829, p=0.000	503.871, p=0.000

Note: *** means P<0.001; ** means P<0.01; * means P<0.05.

First of all, in Model 1, the PU has a significant regression to the FE. The regression model has R^2=0.0.41, corrected R^2=0.41, and F=276.92, indicating that the regression model fits well, and the regression coefficient β=0.0 .699 (P<0.001), assuming H6 is validated. Secondly, in Model 2, the PU has a significant regression on the PB, the regression model R^2=0.684, the adjusted R^2=0.684, F=1968.829, indicating that the regression model fits well, and the regression coefficient β=0.772 (P<0.001), hypopaper H2 was validated. Therefore, in the mediation test, the relationship between the independent variable and the mediating variable and the dependent variable is significant. Finally, in Model 3, when FE is added as a mediating variable, the regression model has R^2=0.526, adjusted R^2=0.525, and F=503.871, indicating that the regression model fits well. Among them, the regression coefficient of PU is β=0.152 (P<0.001), and the regression coefficient of FE is β=0.708 (P<0.001). Hypopaper H8 is verified. The mediation effect ratio was 78.21%.

5. Conclusion

This study takes Chinese higher vocational students who use the knowledge payment platform as the research object. On the basis of literature review, the data obtained from 910 valid questionnaires are used as the research sample, and the empirical analysis is carried out using factor analysis, canonical correlation analysis and multiple regression analysis. The interactive relationship between PV, PU, FE and PB provides theoretical and practical basis for knowledge payment platform to retain Chinese higher vocational student users. Based on the above empirical analysis results, the conclusions of this study are as follows:

(1) PV has a positive impact on PB

This means that in the payment for knowledge scenario, perceived value is an important determinant. If users agree with the content value, functional value, social support, and price value of the knowledge-based payment platform, they will have strong continuous use and purchase behavior. In particular, specific to Chinese higher vocational students, if they think the product is related to skill training, if they perceive the platform to navigate clearly, and if they get the necessary emotional support from the platform, how do they think the value of the paid knowledge product is related to the price? Matching will promote perceived value, which in turn promotes payment behavior.

(2) PU has a positive effect on PB

It means that in the knowledge payment scenario, perceived usefulness is an important determinant. When the perceived usefulness of the knowledge payment platform is positive, there will be significantly higher payment behaviors, such as thinking that it can improve learning efficiency, thinking that it can make full use of spare time, thinking that it can

effectively realize the construction of professional knowledge, and thinking that it can effectively realize the position. Skill building, they generate strong sustained use and purchase behavior.

(3) PU is positively correlated with PV

It means that the strength of perceived usefulness affects the level of perceived value, and there is a significant positive correlation between the two. In the knowledge payment scenario, if users believe that the platform can improve their learning efficiency, that the platform can allow them to make full use of their spare time, and that the platform can effectively improve their professional knowledge level and job ability level, it will significantly affect their perceived value.

(4) FE mediates between PV and PB

It means that in the context of knowledge payment, immersion experience is an important dimension, and immersion experience has a mediating effect between perceived value and payment behavior. In the realm of knowledge payment, if users perceive focus and enjoyment, that is, enter a state of immersive experience, they will have a strong behavior of continuous use and purchase. In particular, when users perceive that time is passing quickly and they can control their learning progress, they will have a strong payment behavior. In particular, specific to Chinese higher vocational students, if they think the product is related to skill training, if they perceive the platform to navigate clearly, and if they get the necessary emotional support from the platform, how do they think the value of the paid knowledge product is related to the price? Matching will promote the user's perception of concentration and enjoyment, and then promote the payment behavior.

(5) FE mediates between PU and PB

It means that immersion experience has a mediating effect between perceived usefulness and payment behavior. In the realm of paying for knowledge, especially, if users believe that the platform can improve their learning efficiency, that the platform can allow them to make full use of their spare time, and that the platform can effectively improve their professional knowledge level and job ability level, it will significantly affect their learning efficiency. The immersive experience promotes the user's perception of concentration and enjoyment, which in turn promotes payment behavior. This research has certain practical and theoretical significance. However, there are still some deficiencies in this study, and the following aspects need to be further studied and discussed.

(1) Subsequent studies should use a wider sample to make the findings more generalizable.

(2) There are many influencing factors related to payment behavior, and follow-up research will introduce new variables for in-depth discussion.

(3) Subsequent research needs to conduct in-depth discussions from multiple dimensions and levels, such as considering different factors by industry to conduct research to comprehensively analyze the mechanism and interaction that affect various factors and payment behavior.

References

Al-Emran, M., & Granić, A. (2021). Is it still valid or outdated? A bibliometric analysis of the technology acceptance model and its applications from 2010 to 2020. In *Recent advances in technology acceptance models and theories* (1–12). Springer.

Bai Yu. (2017). *A Study on Influencing Factors of Sustainability Intention of Academic Virtual Community.* Library Science Research, (5), 2–6. https://doi.org/10.15941/j.cnki.issn1001-0424.2017.05.001

Benbasat, I., & Barki, H. (2007). Quo vadis TAM? *Journal of the Association for Information Systems*, *8*(4), 7. https://doi.org/10.17705/1jais.00126

Bhattacherjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly*, 351–370. https://doi.org/10.2307/3250921

Bhattacherjee, A., Perols, J., & Sanford, C. (2008). Information technology continuance: A theoretic extension and empirical test. *Journal of Computer Information Systems*, *49*(1), 17–26. https://doi.org/10.1080/08874417.2008.11645302

Canarslan, N. Ö., & Bariş, G. (2022). Flow Experience and Consumer Willingness to Pay in Online Mass Customization Processes. *International Journal of Online Marketing (IJOM)*, *12*(1), 1–21. https://doi.org/10.4018/IJOM.288423

Csikszentmihalyi, M. (1975). Beyond boredom and anxiety. San Francisco: Jossey-Bass. Csikszentmihalyi, M.(1990). Flow: The psychology of optimal experience. *New York: Harper & Row. Ellis, JB (1991). Bacterial Water Quality and Public Health Risks Associated with the Recreational Use of Urban Waters. Environmental Health*, *99*(9), 233–236.

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, *13*(3), 319–340. https://doi.org/10.2307/249008

de Morais Watanabe, E. A., Alfinito, S., Curvelo, I. C. G., & Hamza, K. M. (2020). Perceived value, trust and purchase intention of organic food: A study with Brazilian consumers. *British Food Journal*, *122*(4), 1070–1184. https://doi.org/10.1108/BFJ-05-2019-0363

Du Zhitao & Xu Jinghong. (2018). *From Demand to Experience: Factors Influencing Users' Online Knowledge Payment Behavior.* Journalism and Communication Research, 25(10), 18-39+126.

Fang Aihua, Lu Mengmeng, & Liu Kunfeng. (2018). *An Empirical Study on Users' Willingness to Pay for Knowledge in Virtual Communities.* Library and Information Work, 62(6), 105–115. https://doi.org/10.13266/j.issn. 0252-3116.2018.06.013

Gan, C., & Wang, W. (2017). The influence of perceived value on purchase intention in social commerce context. *Internet Research*. https://doi.org/10.1108/IntR-06-2016-0164

Gong Xiaoxiao; Ye Zuoliang; Wu Yuping; Liu Jiaying; (2019). *Influence Mechanism of Atmospheric Clues in Live Streaming Scenes on Consumers' Intention to Consume Impulsively.* Journal of Management, (06 vo 16), 875–882.

Ha, N. (2020). The impact of perceived risk on consumers' online shopping intention: An integration of TAM and TPB. *Management Science Letters*, *10*(9), 2029–2036. https://doi.org/10.5267/j.msl.2020.2.009

Huang Mengmei; Lu Xinyuan; Wang Xuelin; Jiang Yuanpei. (2021). *Research on the Linkage Effect of Differentiated Users' Online Knowledge Payment Willingness Based on fsQCA*. Information Science, (07 vo 39), 169-176+192. https://doi.org/10.13833/j.issn.1007-7634.2021.07.023

Hyun, H., Thavisay, T., & Lee, S. H. (2022). Enhancing the role of flow experience in social media usage and its impact on shopping. *Journal of Retailing and Consumer Services*, *65*, 102492. https://doi.org/10.1016/j.jretconser.2021.102492

Iriani, S. S., & Andjarwati, A. L. (2020). Analysis of perceived usefulness, perceived ease of use, and perceived risk toward online shopping in the era of Covid-19 pandemic. *Systematic Reviews in Pharmacy*, *11*(12), 313–320.

Kim, J., Lee, H., & Kim, H. (2004). Factors affecting online search intention and online purchase intention. *Seoul Journal of Business*, *10*.

Konuk, F. A. (2018). The role of store image, perceived quality, trust and perceived value in predicting consumers' purchase intentions towards organic private label food. *Journal of Retailing and Consumer Services*, *43*, 304–310. https://doi.org/10.1016/j.jretconser.2018.04.011

Kripesh, A. S., Prabhu, H. M., & Sriram, K. V. (2020). An empirical study on the effect of product information and perceived usefulness on purchase intention during online shopping in India. *International Journal of Business Innovation and Research*, *21*(4), 509–522. https://doi.org/10.1504/IJBIR.2020.105982

Kühn, S. W., & Petzer, D. J. (2018). Fostering purchase intentions toward online retailer websites in an emerging market: An SOR perspective. *Journal of Internet Commerce*, *17*(3), 255–282. https://doi.org/10.1080/15332861.2018.1463799

Larson, R., Csikszentmihalyi, M., & Graef, R. (1982). Time alone in daily experience: Loneliness or renewal. *Loneliness: A Sourcebook of Current Theory, Research and Therapy*, 40–53.

Li Yazheng. (2016). *A Study on Influencing Factors of Online Education Platform Users' Continued Use Intention and Course Payment Willingness (PhD Paper, University of Science and Technology of China).* University of Science and Technology of China.

Li Ying & Xiao Shan. (2019). *The influence of user flow experience on knowledge sharing willingness in knowledge quiz community——From the perspective of PAT model*. Modern Intelligence, 39(2), 111–120.

Lu Ying; Zhang Min. (2021). *A Study on Influencing Factors of College Students' Knowledge Payment Behavior. Journal of Hangzhou Normal University (Natural Science Edition),* (01 vo 20), 13–21. https://doi.org/10.19926/j. cnki.issn.1674-232X.2021.01.003

Mohammed, A., & Al-Swidi, A. (2019). The influence of CSR on perceived value, social media and loyalty in the hotel industry. *Spanish Journal of Marketing-ESIC*. https://doi.org/10.1108/SJME-06-2019-0029

Moneta, G. B., & Csikszentmihalyi, M. (1996). The effect of perceived challenges and skills on the quality of subjective experience. *Journal of Personality*, *64*(2), 275–310. https://doi.org/10.1111/j.1467-6494.1996.tb00512.x

Moslehpour, M., Pham, V. K., Wong, W.-K., & Bilgiçli, İ. (2018). e-Purchase Intention of Taiwanese Consumers: Sustainable Mediation of Perceived Usefulness and Perceived Ease of Use. *Sustainability*, *10*(1), 234. https://doi.org/10.3390/su10010234

Peng, L., Zhang, W., Wang, X., & Liang, S. (2019). Moderating effects of time pressure on the relationship between perceived value and purchase intention in social E-commerce sales promotion: Considering the impact of product involvement. *Information & Management*, *56*(2), 317–328. https://doi.org/10.1016/j.im.2018.11.007

Porter, M. E. (1985). Competitive advantage: Creating and sustaining superior performance. 1985. *New York: FreePress*, *43*, 214.

Shahpasandi, F., Zarei, A., & Nikabadi, M. S. (2020). Consumers' impulse buying behavior on Instagram: Examining the influence of flow experiences and hedonic browsing on impulse buying. *Journal of Internet Commerce*, *19*(4), 437–465. https://doi.org/10.1080/15332861.2020.1816324

Sheth, J. N., Newman, B. I., & Gross, B. L. (1991). Why we buy what we buy: A theory of consumption values. *Journal of Business Research*, *22*(2), 159–170.

Slater, D. (1997). Consumer Culture and. *Buy This Book: Studies in Advertising and Consumption*, *51*.

Smith, D. N., & Sivakumar, K. (2004). Flow and Internet shopping behavior: A conceptual model and research propositions. *Journal of Business Research*, *57*(10), 1199–1208. https://doi.org/10.1016/S0148-2963(02)00330-2

Sweeney, J. C., & Soutar, G. N. (2001). Consumer perceived value: The development of a multiple item scale. *Journal of Retailing*, *77*(2), 203–220. https://doi.org/10.1016/S0022-4359(01)00041-0

Wang, L., Yang, Y., & Li, Y. (2021). Extending lead-user theory to a virtual brand community: The roles of flow experience and trust. *Asian Business & Management*, *20*(5), 618–643. https://doi.org/10.1057/s41291-019-00097-9

Wang Xuhui, Xu Xiaoxiao, & Wang Xin. (2022). *Research on the influence of smart shopping experience on consumers' purchase intention*. Consumer Economics, 38(3), 87–96.

Woodruff, R. B. (1997). Customer value: The next source for competitive advantage. *Journal of the Academy of Marketing Science*, *25*(2), 139–153.

Xu Xueqi & Zhang Yawen. (2020). *A Study on Influencing Factors of Mobile Learning Platform Users' Intention to Use: A Technology Acceptance Model Based on Mobile Context and Flow Experience*. Electronic Education Research, 41(3), 69-75+84. https: https://doi.org/10.13811/j.cnki.eer.2020.03.009

Xue Yunjian, Dong Yu, & Pu Xujin. (2021). *Model Construction and Empirical Study of User's Continued Use Intention of Knowledge Payment App*. Economics and Management, 35(4), 17–23.

Xu Yanan; Zhang Mengqi; Dong Zhihua; He Huixue; Zhao Huimin. (2018). *Factors of college students' willingness to pay for online courses*. Management Observation, (32), 117–118.

Yonggui Wang, Hing-Po Lo, & Yongheng Yang. (2004). An integrated framework for service quality, customer value, satisfaction: Evidence from China's telecommunication industry. *Information Systems Frontiers*, *6*(4), 325–340. https://doi.org/10.1023/B:ISFI.0000046375.72726.67

Zhang Chenxue. (2019). *Investigation and Research on College Students' Purchase of Paid Knowledge Products.* Economic Research Guide, (34), 63-66+137.

Zhang Jing. (2020). *Analysis of the influence mechanism of channel selection on consumers' purchase intention under the SOR model—with flow experience as the mediating variable.* Business Economics Research, (6), 73–75.

Zhao Baoguo & Yao Yao. (2017). *A Study on Influencing Factors of Users' Willingness to Continue to Use Knowledge Payment APPs.* Library Science Research, (17), 96–101. https://doi.org/10.15941/j.cnki.issn1001- 0424.2017.17.017

Zhao Feifei; Qu Xingyi; Zhou Qingshan. (2019). *An Empirical Study on Influencing Factors of Users' Willingness to Pay for Knowledge in Online Question Answering Community.* Information and Documentation Work, (01 vo 40), 89–97.

Zhou Tao, Tan Qi, & Deng Shengli. (2019). *Research on knowledge-paying user behavior based on IS success model*. Modern Intelligence, 39(8), 59–65.

Zeithaml, V. A., Parasuraman, A., Berry, L. L., & Berry, L. L. (1990). *Delivering quality service: Balancing customer perceptions and expectations*. Simon and Schuster.

Zhu Jiani, Zhang Guoliang, & Yao Junxi. (2019). *A Study on the Effect of Perceived Value on Mobile Short Video Attachment: Based on the Mediating Effect Perspective of Internet Belonging and Internet Privacy Concerns.* Journalism University, (07), 68-82+123.

Cite this article:

Zhang Ling (2022). Analysis of Factors Affecting Knowledge Payment: A Study on Chinese Higher Vocational Students as the Survey Object. *International Journal of Science and Business, 16*(1), 285-299. doi: https://doi.org/ 10.5281/zenodo.7145889

Retrieved from http://ijsab.com/wp-content/uploads/989.pdf

Published by