pISSN: 1906 - 6406 The Scholar: Human Sciences
eISSN: 2586 - 9388 The Scholar: Human Sciences
http://www.assumptionjournal.au.edu/index.php/Scholar

Measuring Satisfaction and Purchase Intention of Art Major Students Towards Mobile Games: A Case of Public Universities in Chongqing, China

Jinghao Yang*

Received: February 4, 2024. Revised: March 21, 2024. Accepted: February 18, 2025.

Abstract

Purpose This study explores the factors impacting the purchase intention of mobile games for art major students in Public Universities in Chongqing, China. **Research design, data, and methodology:** The researcher employed a quantitative approach to collect sample data from the target population, utilizing a questionnaire. Before distributing the questionnaire, the Item-Objective Congruence and conducted a pilot test to ensure content validity and reliability were employed. To validate the model's goodness of fit and confirm the causal relationship among variables for hypothesis testing, we analyzed the data using Confirmatory Factor Analysis and Structural Equation Modeling. **Results:** All six hypotheses in this study were consistent with the research objectives. Satisfaction and perceived value were the strongest predictors of purchase intention for mobile games. Perceived value is influenced by perceived enjoyment, social influence, perceived compatibility, and usefulness. The study found that its conceptual model can predict and explain college students' purchase intention on mobile games. Satisfaction and value were identified as key predictors and preconditions of mobile game purchase intention. **Conclusions:** This study suggests that mobile game developers and marketers of mobile games should focus on improving the perceived compatibility of mobile games. This will help students think the system is valuable and intend to purchase mobile games.

Keywords : Mobile Games, Purchase Intention, Perceived Compatibility, Perceived Value, Satisfaction

JEL Classification Code: E44, F31, F37, G15

1. Introduction

Mobile games are becoming an important form of entertainment with the development of smartphones and the Internet. Due to its simple operation and portability, mobile games are one of the most popular forms of entertainment in modern times. They have gradually become a social way in the new era, and the consumption of mobile games is increasingly accepted by consumers. In the era of mobile interconnection, people's lifestyles have undergone great changes with the rapid development of communication technology (Lane et al., 2010).

China's mobile game market continues to grow at an average annual growth rate of more than 13% until 2023, from the current $50.62 billion in 2018 to $115.73 billion in 2023, and the user base will continue to grow. From the three aspects of business model, development model, and industry policy, China's mobile game market will still have a stable development trend in the future, which fully reflects the development potential of China's mobile game market. (YANYI, 2023)

Contrary to the high school years, the college years play

1*Jinghao Yang, School of Media and Communication, Yangtze Normal University, China. Email: 20180013@yznu.eud.cn

© Copyright: The Author(s)
This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (http://Creativecommons.org/licenses/by-nc/4.0/)which permits unrestricted noncommercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

The Scholar: Human Sciences

a crucial role in shaping one's worldview, lifestyle, and values. With increased autonomy and freedom, college students often find that participating in mobile online games has become part of their lives. Especially for art major students, their family conditions are better, and there is a relatively strong desire to consume. It is an important part of mobile game consumers (Wang, 2021).

The focus shifted to expanding the customer base and facilitating in-game purchases to ensure a stable revenue stream. Therefore, understanding what motivates players to play and pay is critical for developers and retailers. (Wang, 2021).

Through empirical research, it is proved that in the online world, players play a virtual role, try another personality, satisfy the players' self-imagination, express the players' desire to explore another self-identity and shape the self-identity to become the intrinsic motivation of players to play games. (Li, 2004).

The validity of consumption value theory has been widely recognized; previous research has identified different value components in different contexts; providing superior value is the key to business success, and identifying value in the minds of consumers is also crucial to explain their behavior (Sweeney et al., 1997).

Mobile game vendors face the problem of creating in-game needs so that players perceive them as desirable. Value is defined as the total evaluation and evaluation of the total utility of a product by the consumer. This utility is based on a subjective trade-off between customer sacrifice and benefits in return (Grace & Weaven, 2011).

In some mobile game studies, satisfaction, as an effective response, is a fundamental concept for understanding user experience and behavior in different contexts. Its influence extends to system reuse, payment persistence, loyalty, buyback willingness, and price sensitivity. (Delone & McLean, 2003)

Previous studies have shown that satisfaction is used to study several issues, including continuous purchase of intent mobile value-added services. Satisfaction is also related to perceived value. If players are satisfied with the game, they are more likely to engage deeply in it and invest more time and energy in it (Zhou et al., 2014).

2. Literature Review

2.1 Perceived Enjoyment

Perceived enjoyment in mobile gaming environments refers to the subjective assessment of the pleasant experience of using a mobile phone as a gaming device (Choe & Schumacher, 2014). It reflects individuals' enjoyment and satisfaction when playing mobile games on their devices.

Bhattacherjee (2001) researched interactive hedonic technology and discovered that perceived enjoyment significantly shapes user opinions. Their findings indicated that the level of enjoyment experienced while using a technology substantially impacts the overall attitude of users towards that technology.

Bruner and Kumar (2005) found that perceived enjoyment has a greater impact on user attitudes than perceived utility. This suggests that the hedonic aspect of hedonism has a greater impact on user perceptions and attitudes in the context of portable Internet devices. Thus, a hypothesis is indicated:

H1: Perceived enjoyment has a significant impact on perceived value.

2.2 Social Influence

Social influence is a broad and multifaceted concept that has been extensively examined in various contexts. It can be categorized into two main forms: influence from public media and interpersonal influence from users' social networks (Boro et al., 2018).

Venkatesh et al. (2003) defined social influence as an individual perception of the social benefits derived from adopting an innovation. This perception highlights the role of social influence in shaping individuals' attitudes and adoption behaviors, considering the potential benefits or advantages they can gain from following the preferences and actions of others in their social networks.

Yang et al. (2012) found that social influence positively influenced individuals' willingness to adopt mobile payment services. This suggests that individuals may be more likely to adopt and use mobile payment services when they observe others in their social networks using and benefiting from them. Thus, a hypothesis is indicated:

H2: Social influence has a significant impact on perceived value.

2.3 Perceived Compatibility

Rogers (1995) describes perceived compatibility as measuring how well a new technology aligns with potential adopters' values, past experiences, and existing practices.

In the realm of e-learning systems, perceived compatibility can be described as the extent to which the system is perceived as aligning with students' existing values, needs, and experiences (Moore & Benbasat, 1991). Agarwal and Prasad (1997) describe compatibility as the perception that an innovation is compatible with an individual's work behavior. In this context, compatibility refers to the perceived fit between the innovation and the existing practices and behaviors of the innovator.

Previous studies have highlighted compatibility's direct

The Scholar: Human Sciences

and positive impact on users' adoption intentions. Perceived compatibility is a crucial factor influencing use intention and acting as an intermediary between perceived value and other perceived benefits (Kleijnen, 2007; Schilling, 2002). Thus, a hypothesis is indicated:

H3: Perceived compatibility has a significant impact on perceived value.

2.4 Perceived Usefulness

Perceived usefulness is a key concept that has been e xtensively studied in the literature, capturing individuals' subjective judgments about the benefits and effectiveness of implementing a particular behavior to achieve desired outcomes. According to Davis (1989), perceived usefuln ess refers to individuals' perception of how much a give n system will enhance their job performance.

It is widely recognized that functional value is critical in determining the acceptance of new technology. Previous research in the context of mobile applications, including studies by Kim et al. (2016) and Gurtner et al. (2014), consistently highlight the significant correlation between perceived usefulness and users' acceptance and intention to use. Furthermore, positive relationships have been found between the effectiveness of new technologies and the maximization of perceived value in other domains. Thus, a hypothesis is indicated:

H4: Perceived usefulness has a significant impact on perceived value.

2.5 Perceived Value

In previous studies, a consumer's overall perception of the utility of a product or service has been described as perceived value. The consumer's perception of what is received and given determines the outcome of this evaluation. Perceived value includes consumers' perceptions of the benefits they receive and the sacrifices they make to use the product or service. (Hsiao & Chen, 2016).

Park and Lee (2011) highlighted the influence of factors such as enjoyment, character abilities, visual authority, and monetary value on users' perceived value in this domain. These dimensions play a key role in directly affecting how users derive value from purchased online game items.

Game research shows that players have different lifestyles and personalities, so their satisfaction evaluation will also differ. Hsiao and Chen pointed out that value-related factors can positively affect satisfaction and loyalty (Hsiao & Chen, 2016). Thus, a hypothesis is indicated:

H5: Perceived value has a significant impact on satisfaction.

2.6 Satisfaction

Satisfaction is a multidimensional concept that captures an individual's overall feelings or attitudes in response to various factors influencing their experience in a given situation. Petter et al. (2013) define satisfaction as the sum of an individual's feelings or attitudes toward numerous factors that affect their situation. It signifies individuals' emotional responses based on their assessment of their experiences.

Satisfied customers are more likely to have a higher intention to repurchase and continue engaging with a specific product or service. Moreover, less price-sensitive individuals exhibit higher satisfaction levels and are more likely to make additional purchases from the same company (Lovelock & Wright, 2002).

Numerous studies in the technology sector, specifically in online environments, have confirmed the significant relationship between satisfaction and purchase intention (Hsiao et al., 2016; Wen et al., 2011). This relationship has been observed in various online contexts, affirming the key role of satisfaction as a reliable predictor of individual purchasing attitudes, including purchase intention, brand choice, and repeat purchase intention. Thus, a hypothesis is indicated:

H6: Satisfaction has a significant impact on purchase intention.

2.7 Purchase Intention

Engel et al. (2001) propose that purchase intention involves a subjective judgment of one's future behavior. It captures individuals' subjective assessment of their likelihood to engage in a purchasing behavior in the future. Shao et al. (2004) explain that purchase intention encompasses individuals' attempts to acquire products or visit stores that provide services. It signifies individuals' intention or desire to engage in a purchase behavior and acquire the desired product or service. Grazioli and Jarvenpaa (2000) propose that trust is a crucial factor in influencing internet users' purchase intentions in the context of e-commerce. When consumers have trust in an online platform or seller, they are more likely to have higher purchase intentions and engage in online transactions. Trust, either directly or indirectly, influences individuals' willingness to engage in online shopping and make purchases.

The Scholar: Human Sciences

3. Research Methods and Materials

3.1 Research Framework

This conceptual framework was developed from previous research frameworks. It is adapted from three theoretical models. Zhou et al. (2019) investigated the effect of Perceived Enjoyment (PE), Perceived Compatibility(PC), Perceived Usefulness(PU), and Social Influence(SI) on the persistent Perceived Value (PV) of users. Secondly, Ho et al. (2020) confirmed that Perceived Value (PV) significantly impacted users' Satisfaction. The third study came from Kuo et al. (2020), who used the Satisfaction variable to prove that it greatly influenced users' Purchase Intention. The conceptual framework of this study is shown in Figure 1

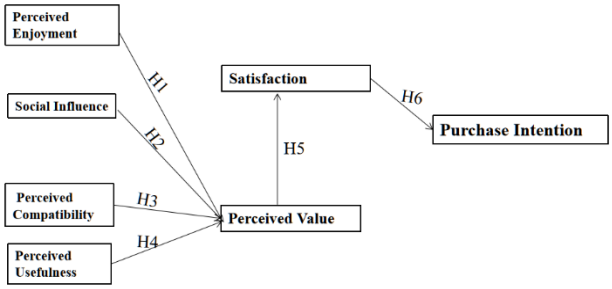

Figure 1: Conceptual Framework

H1: Perceived enjoyment has a significant impact on perceived value.
H2: Social influence has a significant impact on perceived value.
H3: Perceived compatibility has a significant impact on perceived value.
H4: Perceived usefulness has a significant impact on perceived value.
H5: Perceived value has a significant impact on satisfaction.
H6: Satisfaction has a significant impact on purchase intention.

3.2 Research Methodology

Using the quantitative method of non-probability sampling, researchers take the target population of colleges and universities in Chongqing, China -- art major students as the research object and conduct a questionnaire survey on the value of the influencing factors of mobile game Purchase Intention. Data were collected to analyze the key influencing factors that significantly impacted Purchase Intention (PI). This survey consists of three parts. Firstly, the characteristics of the respondents are identified using the screening questions. Second, we used a 5-point Likert scale to measure the five proposed variables from strongly disagree (1) to agree (5) to analyze all four hypotheses strongly. Finally, demographic questions included gender, age, time spent playing mobile games, and game spending. For pilot testing, 30 respondents were tested for expert ratings and objective consistency indicators.

Quantitative research methods were utilized in this study, focusing on the application of the project-objective consistency (IOC) test and Cronbach's Alpha test. A panel comprising three experts evaluated the Index of Item-Objective Congruence (IOC) to ascertain the effectiveness of each item in measuring its intended construct, thereby bolstering the validity of the assessment. In the pilot test involving 30 participants, the Cronbach's Alpha score surpassed 0.7, affirming the dependable measurement of the targeted construct and strengthening the overall reliability of the test outcomes.

Cronbach's Alpha approach was tested for validity and reliability. After the reliability test, the questionnaire was distributed to target respondents, which resulted in 500 accepted responses. The researcher analyzed the collected data through SPSS AMOS 26.0. Then, Confirmatory Factor Analysis (CFA) was used to test the convergence accuracy and validation. The model fit measurement was calculated with the overall test with given data to ensure the validity and reliability of the model. Lastly, the researcher applied the Structural Equation Model (SEM) to examine the effect of variables.

3.3 Population and Sample Size

The subjects of this paper are undergraduates from universities in Chongqing, China. They are all art students. The sample size for structural equation modeling recommends at least 200 respondents (Kline, 2011) to participate in the study. The survey involved 530 people. After the data screening process, 500 questionnaires were used in this study.

3.4 Sampling Technique

Through non-probability sampling and judgment sampling, the researchers selected three schools in Chongqing, namely Southwest University (SWU), Chongqing University (CQU), and Yangtze Normal University (YZNU), which are located in different areas of Chongqing, China. This ensures the diversity of the sample. Secondly, the three schools have a long history and many art students. Then, quota sampling was used to take the number of art students in each school as the total value. See Table 1. After that, the researchers distributed the questionnaire online using convenience sampling.

The Scholar: Human Sciences

Table 1: Sample Units and Sample Size

Application (moblie)	Population Size	Proportional Sample Size
Southwest University	3175	191
Chongqing University	1908	115
Yangtze Normal University	3228	194
Total	**8311**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

Demographic indicators an overview of the 500 participants is shown in Table 2. 60.69% of the respondents were male, and 39.31% were female. The largest age group in this study is 18-20 years old, accounting for 72.46%, followed by 20-22 years old, accounting for 24.64%, and over 22 years old, accounting for 2.9%. Among the students who participated in the survey, 49.28% and 32.79% of students played mobile phone games for 1-2 hours and 2-3 hours each day, while 17.93% of students played mobile phone games for more than 3 hours each day. In this cost, 18.4% of participants did not spend money on mobile games, 23.6% Within 100, 50.4% 100-300, and 7.6% Over 300.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	303	60.69%
	Female	197	39.31%
Age	18-20 years old	363	72.46%
	20-22 years old	123	24.64%
	Over 22 years old	14	2.9%
usually spend playing	An hour	246	49.28%
	One to three hours	164	32.79%
	Over three hours	90	17.93%
Spend money on games (by the month)	0	92	18.4%
	Within 100	118	23.6%
	100-300	252	50.4%
	Over 300	38	7.6%

4.2 Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) was conducted in this study. All items in each variable are significant and represent factor loading to test discriminant validity. The significance of factor loading of each item and acceptable values indicate the goodness of fit (Hair et al., 2006). Factor loadings show a greater value than 0.30 and a p-value lower than 0.05. The construct reliability is greater than the cut-off points of 0.7, and the average variance extracted was greater than the cut-off point of 0.5 (Fornell & Larcker, 1981) in Table 3. All estimates are significant.

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Perceived Enjoyment (PE)	Wang et al. (2020)	4	0.907	0.73-0.95	0.911	0.721
Social Influence (SI)	Wang et al. (2020)	4	0.791	0.647-0.733	0.709	0.486
Perceived Compatibility (PC)	Tang et al. (2019)	4	0.684	0.679-0.931	0.873	0.636
Perceived usefulness (PU)	Tang et al. (2019)	4	0.843	0.633-0.943	0.851	0.597
Perceived Value (PV)	Chen (2014)	3	0.764	0.642-0.788	0.768	0.526
Satisfaction (SAT)	Wu and Lee (2011)	3	0.897	0.836-0.903	0.896	0.896
Purchase Intention (PI)	Lee (2009)	3	0.858	0.722-0.872	0.865	0.682

The square root of the average variance extracted is determined to have all the correlations greater than the corresponding correlation values for that variable as of Table 4. In addition, GFI, AGFI, NFI, CFI, TLI, and RMSEA are used as indicators for model fit in CFA testing.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/ DF	≤ 5.0 (Wheaton et al., 1977)	640.162/254 or 2.520
GFI	≥ 0.80 (Doll et al., 1994)	0.907
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.881
NFI	≥ 0.80 (Wu & Wang, 2006)	0.921
CFI	≥ 0.80 (Bentler, 1990)	0.950
TLI	≥ 0.80 (Sharma et al., 2005)	0.941
RMSEA	≤ 0.10 (Hopwood & Donnellan, 2010)	0.055
Model Summary		**Acceptable Model Fit**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, CFI = comparative fit index, TLI = Tucker Lewis index, and RMSEA = root mean square error of approximation

The convergent validity and discriminant validity were verified as the values of this study shown in Table 5 are greater than acceptable values. Therefore, convergent validity and discriminant validity are ensured. Moreover,

The Scholar: Human Sciences

these model measurement results consoled discriminant validity and validation to measure the validity of subsequent structural model estimation.

Table 5: Discriminant Validity

	PE	SI	PC	PU	PV	SAT	PI
PE	**0.849**						
SI	0.433	**0.697**					
PC	0.485	0.44	**0.797**				
PU	0.322	0.242	0.254	**0.772**			
PV	0.422	0.366	0.436	0.364	**0.725**		
SAT	0.579	0.519	0.57	0.321	0.582	**0.861**	
BI	0.54	0.551	0.518	0.329	0.52	0.745	**0.825**

Note: The diagonally listed value is the AVE square roots of the variables
Source: Created by the author.

4.3 Structural Equation Model (SEM)

According to Hair et al. (2010), Structural Equation Modeling (SEM) validates the causal relationship among variables in a proposed model and encompasses measurement inaccuracy in the structure coefficient. The goodness of fit indices for the Structural Equation Model (SEM) is measured as demonstrated in Table 6. According to the suggestions of Wheaton, Muthen, Alwin, and Summers et al., Chi-square/degrees-of-freedom (CMIN/DF), the measured value of model fitting should not exceed 3. According to Doll et al., GFI should be higher than 0.8; according to Bentler, CFI should be higher than 0.8. The calculation in SEMs and adjusting the model by using SPSS AMOS version 26, the results of the fit index were presented as a good fit, which are CMIN/DF = 3.929, GFI = 0.841, AGFI = 0.808, NFI = 0.869, CFI = 0.898, TLI = 0.887 and RMSEA = 0.077, according to the acceptable values are mentioned in Table 6.

Table 6: Goodness of Fit for Structural Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/ DF	≤ 5.0 (Wheaton et al., 1977)	1056.97/269 or 3.929
GFI	≥ 0.80 (Doll et al., 1994)	0.841
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.808
NFI	≥ 0.80 (Wu & Wang, 2006)	0.869
CFI	≥ 0.80 (Bentler, 1990)	0.898
TLI	≥ 0.80 (Sharma et al., 2005)	0.887
RMSEA	≤ 0.10 (Hopwood & Donnellan, 2010)	0.077
Model Summary		**Acceptable Model Fit**

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = goodness-of-fit index, AGFI = adjusted goodness-of-fit index, NFI = normalized fit index, CFI = comparative fit index, TLI = Tucker Lewis index, and RMSEA = root mean square error of approximation

4.4 Research Hypothesis Testing Result

The research model is calculated as the significance of each variable from its regression weights and R2 variances. The result from Table 7 postulated that all hypotheses were supported with a significance at p = 0.05. Continuance Intention has a significant influence on Actual Behavior. Moreover, it has the highest influence of 0.873; however, Attitude (β=0.379), Utilitarian Outcome Expectations (β= 0.305), Hedonic Outcome Expectations (β= 0.295), and Subjective Norm(β= 0.184) have a significant impact on Time Constraint. The model demonstrated the variance of innovative work behavior, as illustrated in Table 7.

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-value	Result
H1: PE→PV	0.378	6.804*	Supported
H2: SI→PV	0.359	6.125*	Supported
H3: PC→PV	0.372	6.591*	Supported
H4: PU→PV	0.266	5.211*	Supported
H5: PV→SAT	0.809	9.593*	Supported
H6: SAT→PI	0.816	16.679*	Supported

Note: * $p<0.05$
Source: Created by the author

The result from Table 7 can be refined that:

H1 has proved that perceived enjoyment is one of the key driving factors affecting the purchase intention of mobile games for college students majoring in art, and the standard coefficient value on the structural path is 0.378. Perceived enjoyment has been shown to play a crucial role in shaping the perceived value of the Internet (Kim et al., 2016). In H2, the analysis results support the hypothesis that Social Influence significantly impacts Perceived value, and its standard coefficient value is 0.359. In H3, the analysis results support the hypothesis that perceived compatibility significantly affects perceived value, with a standard coefficient value of 0.372. In mobile games, perceived compatibility is a key factor affecting purchase intention and mediating between perceived value and other perceived benefits (Schilling, 2002). At the same time, H4 proves that perceived usefulness is also one of the key driving factors affecting the purchase intention of mobile games for art major college students, revealing that the standard coefficient value in the structural path is 0.266. H5 also proves that perceived value is also one of the key driving factors affecting college students' purchase intention of mobile games, revealing that the standard coefficient value in the structural path is 0.809. Players have different lifestyles and personalities, so their satisfaction evaluation will vary. The perceived value and satisfaction will determine whether the player intends to buy. (En-Pei & Zhao, 2013). Finally, H6 proves the influence of the above factors

The Scholar: Human Sciences

on satisfaction, and that satisfaction significantly impacts the purchase intention of college students for mobile games. The standard coefficient value in the structural path is 0.816. Player satisfaction is important because game developers can better understand their intentions and maximize their profits (Wu & Liu, 2007).

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

This research aims to provide further insights into the variables' impact on Perceived Value and Purchase Intention in the context of mobile gaming among university students in Chongqing, China. Based on the hypothesis as the conceptual framework, Perceived Enjoyment (PE), Social Influence (SI), Perceived Compatibility (PC), Perceived Usefulness (PU), Perceived Value (PV), Satisfaction (SAT), and Purchase Intention (PI) were significantly affected. The questionnaire was randomly distributed to students majoring in art from three representative universities in different regions of Chongqing through the Internet. This study adopts the method of data analysis to explore the influencing factors of college students 'purchase Intention on mobile games. Confirmatory factor analysis (CFA) was used to measure the validity and reliability of the model. Therefore, the structural equation model (SEM) is used to analyze the influencing factors of innovative work behavior.

The results prove it. First, satisfaction and perceived value have a significant impact on purchase intention, and the impact is huge. Secondly, perceived value has a significant impact on satisfaction. Thirdly, Perceived Enjoyment, Social Influence, Perceived Compatibility, and Perceived Usefulness also significantly affect perceived value. Among them, Perceived Enjoyment is the most influential factor. The results show that the four aspects of Perceived Enjoyment, Social Influence, Perceived Compatibility, and Perceived Usefulness are positively related to perceived value. In summary, the objectives of this study were to study the key factors of Perceived Enjoyment, Social Influence, Perceived Compatibility, Perceived Usefulness, perceived value, satisfaction, and purchase intention. Player satisfaction and perceived value are important for purchase intentions, and many factors, such as Enjoyment, social, and technology, influence players' purchase intentions because game developers can better understand their intentions and maximize their profits (Wu & Liu, 2007).

5.2 Recommendation

The researchers found that satisfaction and perceived value are the key factors that affect the purchase intention of college students majoring in art in Chongqing, China when they play mobile games. Their influence is almost as powerful and significant. Perceived enjoyment is also an important factor, meaning if mobile games can bring enjoyment to college students, they will be more willing to spend time on mobile games. Therefore, game manufacturers should pay attention to the design of fun mobile games in the overall development and promotion of these aspects to enhance the consumption potential. In addition, Social Influence, Perceived Compatibility, and Perceived Usefulness also play an important role. Game manufacturers can build social platform communities, select mobile game products that meet the values of user groups, and improve the effect of game consumption. Thus, the perceived value of the user is increased. In addition, player satisfaction with the game can increase all players' willingness to pay. This finding is consistent with past research, highlighting that satisfaction can reduce users' willingness to buy alternatives and attract users to pay (Wu & Wang, 2006; Hsiao & Chen, 2016).

5.3 Limitation and Further Study

Although the material selection data analysis and processing have been studied scientifically and meticulously in this paper, some problems cannot be addressed. This paper selects art college students in colleges and universities in Chongqing as research samples to analyze college students' purchase intention for mobile games. However, as a new economic growth pole, mobile games must be studied and analyzed to provide a stronger theoretical foundation for developing mobile games. However, as a complex market object, mobile games have various types, and different mobile games have different profit models. Regarding sample selection for questionnaire distribution, this paper only selects students majoring in art from three universities in Chongqing, China. Although it is more targeted in terms of groups, there are also obvious shortcomings. First, the respondents are all identified as art students, but stratified screening needs to be done within the survey sample. There are also differences in the consumption groups of students from different majors, with different levels and influencing factors. In the follow-up research, the survey samples will be carefully distinguished to explore the authenticity of the influencing factors. In addition, the sample selection is limited to Chongqing, China, which needs more comprehensive sample coverage of college students. In screening influencing factors, it is possible to ignore the influence of other powerful factors. Therefore, in the follow-

The Scholar: Human Sciences

up in-depth investigation and research, the researchers will broaden the investigation field and hypothesis direction and further explore the actual behavioral factors that affect the willingness of college students to continue to use online games from multiple perspectives.

References

Agarwal, R., & Prasad, J. (1997). The role of innovation characteristics and perceived voluntariness in the acceptance of information technologies. *Decision Sciences, 28*(3), 557-582. https://doi.org/10.1111/j.1540-5915.1997.tb01322.x

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107*(2), 238-246. https://doi.org/10.1037/0033-2909.107.2.238

Bhattacherjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly, 25*(3), 351-370. https://doi.org/10.2307/3250921

Boro, P., Debnath, J., Das, T., Naha, B., Debbarma, N., Debbarma, P., Debbarma, C., & Suniti, L. (2018). Milk composition and factors affecting it in dairy Buffaloes: A review. *Animal Research, 2*(1), 1-10.

Bruner, G. C., & Kumar, A. (2005). Explaining Consumer Acceptance of Handheld Internet Devices. *Journal of Business Research, 58,* 553-558. http://dx.doi.org/10.1016/j.jbusres.2003.08.002

Chen, Y. (2014). *Principles and Applications of Analyzing a Citation Space* (1st ed.). Science Press.

Choe, P., & Schumacher, D. (2014). Influence of Different Types of Vibrations on Technical Acceptance of a Mobile Game Aiming for Hedonic Satisfaction. *International Journal of Human–Computer Interaction, 31*(1), 33-43. https://doi.org/10.1080/10447318.2014.959101

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

Delone, W., & McLean, E. (2003). The DeLone and McLean Model of Information Systems Success: A Ten-Year Update. *Journal of Management Information Systems, 19*(4), 9-30.

Doll, R., Peto, R., Wheatley, K., Gray, R., & Sutherland, I. (1994). Mortality in relation to smoking: 40 years' observations on male British doctors. *British Medical Journal, 309*(6959), 901-911. https://doi.org/10.1136/bmj.309.6959.901

Engel, J. F., Blackwell, R. D., & Miniard, P. W. (2001). *Consumer Behavior*. Division of Thomson Learning.

En-Pei, L., & Zhao, L.-L. (2013). Vascular Reactivity Index as an Effective Predictor of Mortality in Children with Refractory Septic Shock. *Journal of Intensive Care Medicine, 39*(9), 1602-1609. https://doi.org/10.1177/0885066620914850

Fornell, C. G., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50. https://doi.org/10.1177/002224378101800104

Grace, D., & Weaven, S. (2011). An empirical analysis of franchisee value-in-use, investment risk and relational satisfaction. *Journal of Retailing, 87*(3), 366-380. https://doi.org/10.1016/j.jretai.2010.06.001

Grazioli, S., & Jarvenpaa, S. L. (2000). Perils of internet fraud: an empirical investigation of deception and trust with experienced internet consumers. *IEEE Transactions on Systems, Man, and Cybernetics*, *30*(4), 395-410.

Gurtner, S., Reinhardt, R., & Soyez, K. (2014). Designing mobile business applications for different age groups. *Technological Forecasting & Social Change, 88,* 177-188. https://doi.org/10.1016/j.techfore.2014.06.020

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis: A Global Perspective* (7th ed.). Pearson Education.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, L. R. (2006). *Multivariant Data Analysis* (1st ed.). Pearson International Edition.

Ho, T., Money, N. M., & Schroeder, A. R. (2020). 2019 Update on Pediatric Medical Overuse: A Systematic Review. *JAMA Pediatr, 174*(4), 375-382.

Hopwood, C. J., & Donnellan, M. B. (2010). How should the internal structure of personality inventories be evaluated? *Personality and Social Psychology Review, 14*(3), 332-346. https://doi.org/10.1177/1088868310361240

Hsiao, C.-H., Chang, J.-J., & Tang, K.-Y. (2016). Exploring the influential factors in continuance usage of mobile social Apps: Satisfaction, habit, and customer value perspectives. *Telematics and Informatics, 33*(2), 342-355. https://doi.org/10.1016/j.elerap.2016.01.001

Hsiao, K.-L., & Chen, C.-C. (2016). What drives in-app purchase intention for mobile games? An examination of perceived values and loyalty. *Electronic Commerce Research and Applications, 16,* 18-29.

Kim, S. C., Yoon, D., & Han, E. K. (2016). Antecedents of mobile app usage among smartphone users. *Journal of Marketing Communications, 22*(6), 653-670. https://doi.org/10.1080/13527266.2014.951065

Kleijnen, J. P. C. (2007). Screening Experiments for Simulation: A Review. *Center for Economic Research, 16,* 1-21. https://doi.org/10.2139/ssrn.987789

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). Guilford Press.

Kuo, F. L., Yang, P. H., Hsu, H. T., Su, C. Y., Chen, C. H., & Yeh, I. J. (2020). Survey on Perceived Work Stress and Its Influencing Factors among Hospital Staff during the Covid-19 Pandemic in Taiwan. *The Kaohsiung Journal of Medical Sciences, 36,* 944-952. https://doi.org/10.1002/kjm2.12294

Lane, N. D., Miluzzo, E., & Lu, H. (2010). A survey of mobile phone sensing. *IEEE Communications Magazine, 48*(9), 140-150. https://doi.org/10.1109/mcom.2010.5560598

Lee, D. S. (2009). Training, wages, and sample selection: Estimating sharp bounds on treatment effects. *Review of Economic Studies, 76*(3), 1071-1102. https://doi.org/10.1111/j.1467-937x.2009.00536.x

Li, L. (2004). Virtual Self-Realization: A Psychological Discussion on Online Gaming. *China Communication Science and Technology, 2*(3), 45-59.

Lovelock, C. H., & Wright, L. (2002). *Principles of Service Marketing and Management* (2nd ed.). Prentice-Hall.

The Scholar: Human Sciences

Moore, G. C., & Benbasat, I. (1991). Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research, 2*(3), 192-222. https://doi.org/10.1287/isre.2.3.192

Park, B. W., & Lee, K. C. (2011). Exploring the value of purchasing online game items. *Computers in Human Behavior, 27*(6), 2178-2185. https://doi.org/10.1016/j.chb.2011.06.013

Petter, S., Delone, W., & Mclean, E. (2013). Information systems success: the quest for the independent variables. *Journal of Management Information Systems, 29*(4), 7-61.

Rogers, E. M. (1995). Diffusion of Innovations: Modification of a Model for Telecommunications. *Springer, 1,* 25-38. https://doi.org/10.1007/978-3-642-79868-9_2

Schilling, M. A. (2002). Technology Success and Failure in Winner-Take-All Markets: The Impact of Learning Orientation, Timing and Network Externalities. *Academy of Management Journal, 45,* 387-398. http://dx.doi.org/10.2307/3069353

Shao, C. Y., Baker, J., & Wagner, J. A. (2004). The effects of appropriateness of services contact personnel dress on customer expectations of involvement and gender. *Journal of Business Research*, *57,* 1164-1176.

Sharma, G. P., Verma, R. C., & Pathare, P. (2005). Mathematical modeling of infrared radiation thin layer drying of onion slices. *Journal of Food Engineering, 71*(3), 282-286. https://doi.org/10.1016/j.jfoodeng.2005.02.010

Sica, C., & Ghisi, M. (2007). The Italian versions of the Beck Anxiety Inventory and the Beck Depression Inventory-II: Psychometric properties and discriminant power. In M.A. Lange (Ed.), *Leading - Edge psychological tests and testing research* (pp. 27-50). Nova.

Sweeney, J. C., Soutar, G. N., & Johnson, L. W. (1997). Retail service quality and perceived value: a comparison of two models. *Journal of Retailing and Consumer Services, 4*(1), 39-48.

Tang, J., Zhang, B., & Bin, U. A. (2019). User willingness to purchase applications on mobile intelligent devices: evidence from app store. *Asia Pacific Journal of Marketing and Logistics, 32*(8), 1629-1649. https://doi.org/10.1016/s0969-6989(96)00017-3

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. (2003). User Acceptance of Information Technology: Toward a Unified View. *MIS Quarterly, 27*(3), 425-478. https://doi.org/10.2307/30036540

Wang, C., Horby, P. W., Hayden, F. G., & Gao, G. F. (2020). A novel coronavirus outbreak of global health concern. *Lancet, 395(*10223), 470-473. https://doi.org/10.1016/s0140-6736(20)30185-9

Wang, Y. (2021). A probe into the cultivation path of correct world outlook, outlook on life and values of college students. *Times Figure, 2*(4), 99-100.

Wen, C. P., Wai, J. P. M., & Tsai, M. K. (2011). Minimum amount of physical activity for reduced mortality and extended life expectancy, A prospective cohort study. *The Lancet, 378*(9798), 1244-1253. https://doi.org/10.1016/s0140-6736(11)60749-6

Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. (1977). Assessing reliability and stability in panel models. *Sociological Methodology, 8,* 84-136. https://doi.org/10.2307/270754

Wu, J., & Liu, D. (2007). The effects of trust and enjoyment on intention to play online games. *Journal of Electronic Commerce Research, 8*(2), 128-140.

Wu, J. H., & Wang, Y. M. (2006). Measuring KMS success: A respecification of the DeLone and McLean's model. *Information and Management, 43*(6), 728-739. https://doi.org/10.1016/j.im.2006.05.002

Wu, M.-Y., & Lee, Y.-R. (2011). The effects of internal marketing, job satisfaction and service attitude on job performance among high-tech firm. *African Journal of Business Management, 5*(32), 1-10.

Yang, Y., Li, X. M., Sun, Z. H., Yang, T., Tan, Z. L., Wang, B. F., Han, X. F., & He, Z. X. (2012). The growth performance and meat quality of goats fed diets based on maize or wheat grain. *J. Anim. Feed Sci., 21*(4), 587-598. https://doi.org/10.22358/jafs/66133/2012

YANYI. (2023, November 1). *Yanyi Group Strengthens Global Market Presence under "Belt and Road" Initiative.* https://www.linkedin.com/pulse/yanyi-group-strengthens-global-market-wwm4c?trk=article-ssr-frontend-pulse_more-articles_related-content-card

Zhou, Q., Fellows, A., Flerchinger, G. N., & Flores, A. N. (2019). Examining Interactions Between and Among Predictors of Net Ecosystem Exchange: A Machine Learning Approach in a Semi-arid Landscape. *Scientific Reports 9,* 2222. https://doi.org/10.1038/s41598-019-38639-y

Zhou, Z., Jin, X. L., & Fang, Y. (2014). Moderating role of gender in the relationships between perceived benefits and satisfaction in social virtual world continuance. *Decision Support Systems, 65,* 69-79. https://doi.org/10.1016/j.dss.2014.05.004

The Scholar: Human Sciences