EMPIRICAL RESEARCH ON INFLUENCE FACTORS OF USER'S SATISFACTION OF MOBILE VIDEO APPLICATION

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Thematic Certificate

To

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Abstract

Title:	Empirical Research on Influence Factors of User's Satisfaction of Mobile Video Application
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Along with the evolvement of the times, popularization of smart phones, arrival of incoming 5G and WIFI layout spread all over the city, people have become increasingly dependent on mobile phones. Rich applications satisfy the user's demands. What studied in this paper is the mobile video application, which is one of mobile application types developed at the fastest speed in recent two years. Upon its arrival, the users can watch programs through mobile phone, thus substituting the function of TV and computer to a certain extent and satisfying people's demand for watching movies and giving more choices for users to pass fragments of time.

The output value of swiftly developed video industry is expected to reach 100 billion in 2018. There is also huge market space for mobile phone, which is one of significant medium. However, most researches on mobile video application carried out at home and abroad relate to the development history and tendency but less are related to the quantitative research. The investigation of satisfaction is universally applied into research on physical product and service. However, there are fewer and fewer ways combining the satisfaction and internet product. In this paper, through study on existing theories on satisfaction and by combining the practical features of mobile video application, the hypotheses are proposed and the model is built. Through empirical analysis of questionnaire, the influence factors of mobile video application are studied.

Through analysis on data of the investigation result, it's found that the basic property and video content, interactivity, economy, responsiveness and ease of use of mobile phone video application has positive influence on user satisfaction. According to these qualitative research results, relevant suggestions are provided for the development of mobile video application. It is anticipated that reference could be provided for the development of the industry.

Key words: Mobile video application, Satisfaction, Influence factor, Empirical analysis

摘 要

题目: 手机视频应用用户满意度影响因素的实证研究

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2017 / 12 / 25

随着时代的发展，智能手机的普及，即将到来的 5G 时代以及遍布城市的 WIFI 布局，使人们对手机的依赖越来越大。丰富的应用又满足用户需求，本文所研究的是其中的手机视频应用，是近两年发展最迅速的手机应用类型之一，它的出现，使得用户可以通过手机来观看节目，一定程度上代替了电视和电脑的功能。满足了人们观影的需求，给用户消磨碎片时间多了更多的选择。

目前，视频行业发展迅猛，预计中国在 2018 年将达到 1000 亿产值，手机作为重要的媒介之一，也有巨大的市场空间。然而国内外针对手机视频应用的研究大部分是关于其发展历史及趋势，鲜有对其定量的研究。通常来说，满意度的调查研究普遍用于研究实体产品和服务，将满意度与互联网产品相结合的方式自然是少之又少。本文将通过对现有的满意度理论进行研究，结合手机视频应用的实际特点，提出假设并建立模型，通过问卷调查的实证方法，研究手机视频应用的满意度影响因素。

通过对调查结果的数据进行分析后，基础性能及视频内容，互动性经济性和响应性及易用性，这四项因素会对手机视频应用的用户满意度产生正向影响。针对这些量化研究结果，本文为手机视频应用的发展提供了相关建议，希望能够对其行业的发展提供参考。

关键词：手机视频应用，满意度，影响因素，实证分析

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Sincerely yours,

XUELIANG LIU

Siam University

Content

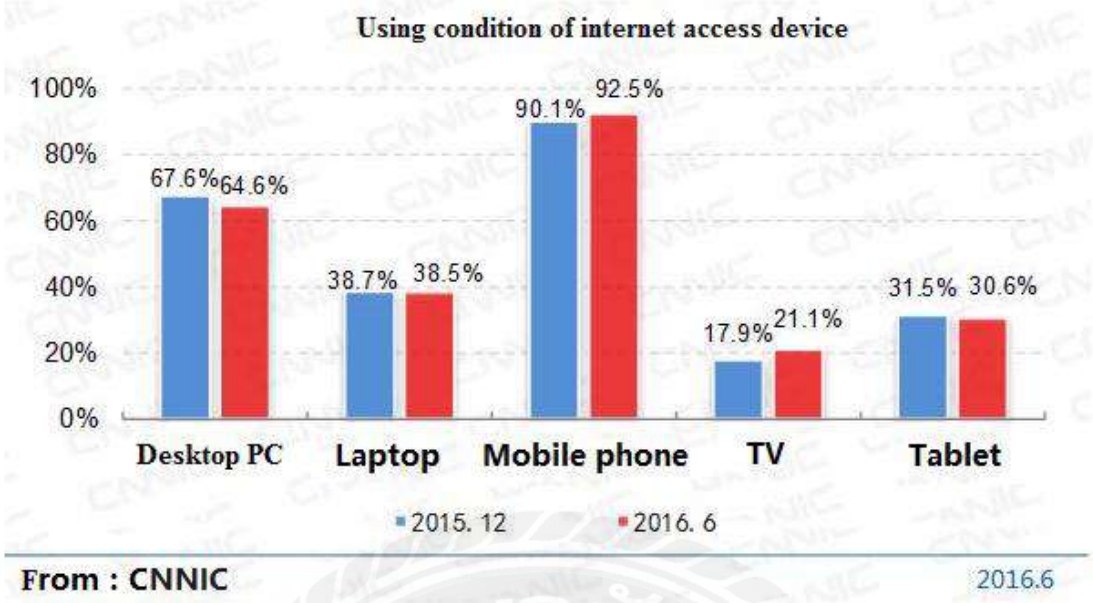
CHAPTER I

INTRODUCTION

1.1 Research background

Along with the incessant social growth, the smart phone has been gradually popular. Meanwhile, the development of mobile phone applications has also become prosperous. At the hi-tech era, the popularization of intelligent terminal not only pushes forward the development of mobile internet but also brings about the explosive increase in mobile applications. As an important intelligent terminal, smart phone has already been evolved into the dispensable communication tool in daily life but also has already become the significant tool for people to receive consulting, enjoying service and having recreations. Through numerous applications, mobile phone has substituted computer and TV. Thus, the users can watch programs on any occasions. Along with the development of mobile phone video application, people have welcomed the new era of video development.

According to the 38th statistics report (2016) of internet development status in China, it releases that the number of mobile phone netizens had reached 656 million by the end of Jun., 2016. The proportion of netizens surfing internet with mobile phone has been increased to 90.1% in late 2015 by 92.5%. The mobile phone plays a part of predominating role in online devices, in which the number of mobile phone netizens among newly increased ones was 13.01 million, accounting for 61.0% of newly increased netizens. Along with the stable increase in new citizens and transformation of original PC netizens, the continuous increase in number of mobile phone netizens has been jointly accelerated. On one hand, the using threshold of internet is reduced thanks to the convenience in surfing internet with mobile phone. On the other hand, mobile phone application services are gradually enriched and closely associated with user's demands for work, life, consumption and entertainment, thus the robust increase in mobile phone users is thoroughly pushed. As shown in the Fig. 1.1, the using condition of internet device access is described.



1.1 Using condition of internet access device

The report also releases that the number of mobile phone network video users has been increased to 440.22 million and netizens using ratio has reached 67.1% according to the using ratio of mobile phone internet applications in China. Mobile phone network video is mainly divided into two parts namely network video and live streaming. Speaking of network video, all video websites' competition against copyright purchasing tends to be slow. The self-made content is refined and differentiated. Speaking of network live streaming, its service aroused social emphasis in the first half of 2016. In addition, it was developed at accelerated speed under the impetus of capital. Meanwhile, the using ratio of internet applications among Chinese netizens is shown in the Fig. 1.2.

2015.12-2016.6 Using ratio of various internet applications among Chinese netizens

	2016.6		2015.12		
Application	User size (ten thousand)	Use Rate	User size (ten thousand)	Use Rate	Growth Rate (Half Year)
Instant Messaging	64177	90.4%	62408	90.7%	2.8%
Search Engine	59258	83.5%	56623	82.3%	4.7%
Online News	57927	81.6%	56440	82.0%	2.6%
Online Video	51391	72.4%	50391	73.2%	2.0%
Online Music	50214	70.8%	50137	72.8%	0.2%
Online Payment	45476	64.1%	41618	60.5%	9.3%
Online Shopping	44772	63.1%	41325	60.0%	8.3%
Online Game	39108	55.1%	39148	56.9%	-0.1%
Online Bank	34057	48.0%	33639	48.9%	1.2%
Network Literature	30759	43.3%	29674	43.1%	3.7%
Online Booking	26361	37.1%	25955	37.7%	1.6%
Email	26143	36.8%	25847	37.6%	1.1%

1.2 Using ratio of various internet applications among Chinese netizens

Judged from the video market industry, it's expected that the scale of Chinese online video industry in 2016 reached 61.59 billion Yuan and 1102.8 billion Yuan in 2018. Mobile phone application is one of main video media. The merchants not only provide rich online video contents for users but also support downloading to satisfy user's demands anytime. As more users use mobile phone instead of PC, an increasing number of enterprises have been marching into mobile phone video market. Meanwhile, the industrial scale of mobile phone video applications in China has also been expanded swiftly. The market scale of Chinese online video industry is as shown in Fig. 1.3.

1.3 Market scale of Chinese online video industry

1.2 Research Purpose

Along with the swift development of the video industry, a lot of market opportunities have been brought. Meanwhile, users have also met more choices. However, as for mobile phone video application enterprises, the increase in user's satisfaction will enable the users to have more choices and purchase the enterprise's service to bring about greater profits for the enterprises. "Which factors will bring about influences to the user's satisfaction" will be a question, which will be discussed in this paper.

Along with the incessant development of global video industry, mobile phone industry has also been confronted with great challenge. It is a major issue to maintain market share in the mobile phone industry. One of important methods to keep market share is to improve user's satisfaction. Therefore, the factors influencing user's satisfaction will be analyzed by combining the user's satisfaction theory and mobile phone applications in this paper so that the websites and merchants of mobile phone applications are improved with target and great profits could be made from the few resources.

Based on abovementioned purposes, the influence factors of user's satisfaction of mobile phone video applications are studied through questionnaire and empirical analysis. Individual opinions on mobile phone video application industry are proposed according to the research result and perspective of management. Through this research, the following purposes will be reached.

To conclude and enrich the studies on user's satisfaction of mobile phone application through exploration into the documents of mobile phone application industry, video industry and satisfaction.

To check whether there is remarkable difference in influences of mobile phone video application user's satisfaction by building mobile phone video application user satisfaction model, research hypothesis and empirical analysis and verifying basic performance, usability, responsiveness, watching content, economy, individualization and interaction.

To study influence factors of user's satisfaction, propose corresponding suggestions and provide theoretical basis for the development of mobile video applications.

1.3 Research Significance

1.3.1 Theoretical significance

The studies on mobile phone applications at home and abroad are mainly associated with the history & development trend, techniques and applications and mobile phone video and mobile user drive. Compared to the traditional industry, there are a lot of studies on satisfaction on physical products and services but few ones on internet products. By analyzing related theories on satisfaction and combining the features of mobile phone video applications, the influence factors of satisfaction of mobile phone video application are proposed to strive for enriching theoretical studies on mobile phone video application.

1.3.2 Practical significance

Judged from the enterprises specialized in development of mobile phone video applications, no matter network video and video live streaming have been

developing robustly in recent two years. Therefore, it is no doubt that mobile phone video application market is an opportunity. The main economic source of this industry is membership charge and advertisement charge. Therefore, it becomes the factor that the enterprises need to pay attention to how to improve user's satisfaction and important factors influencing user's satisfaction. Through empirical study on mobile video applications, concrete suggestions are proposed for the development of mobile phone video applications in this paper.

1.4 Research content

In this paper, the research conclusion is made by taking user's satisfaction of mobile video applications as the content, testing every mobile video application, consulting related papers & documents, concluding influence factors of satisfaction of mobile video applications and based on statistical analysis on data through SPSS software.

According to the topic, the main content in this paper is mainly comprised of following several parts.

Chapter I: Introduction. Research background and significance of mobile video applications is mainly introduced. The classifications, contents, functions and features of mobile video applications are concluded based on reference to researches at home and abroad to form the research theme of this paper. Secondly, the research methods and innovation points in this paper are introduced.

Chapter II: Literature Review. Firstly, the theoretical basis and customer satisfaction theory involved in this paper are described. Secondly, the research status of the current development of mobile video applications and user's behavior is concluded. Lastly, the influence factors satisfaction are concluded based on analysis of influence factors of satisfaction and related theories through literature review.

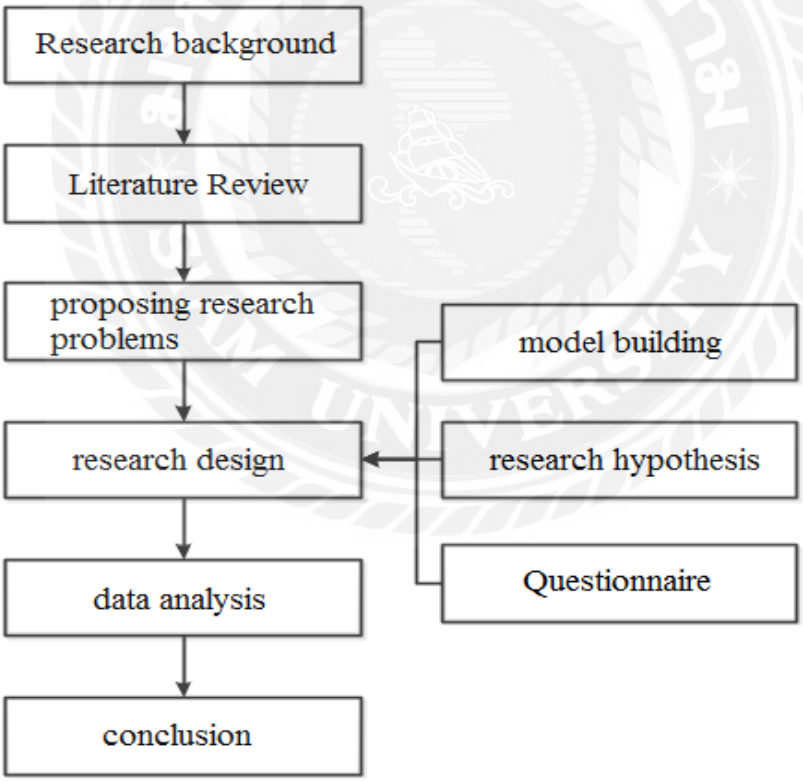
Chapter III: Research Method. Through study on mobile video applications, the model is proposed and built. Besides, through questionnaire, the data is collected and analyzed.

Chapter IV: Data statistics & Analysis. The hypotheses in this paper are analyzed and verified through SPSS software. Through data analysis, the research result is discussed subsequently.

Chapter V: Conclusion & Expectations. Through conclusion of the research results in this paper, the suggestions for satisfaction of mobile video applications are proposed. Besides, the deficiencies of the research are pointed out to further study the questions to be deeply discussed.

1.5 Research framework

Through introduction of the research content, the research is carried out according to the framework of "research background-literature review-proposing research problems-research design-data analysis-conclusion", which is as shown in the Fig. 1.4



1.4 Research technique roadmap

CHAPTER II

LITERATURE REVIEW

2.1 Related literature reviews of mobile phone video

2.1.1 Development process of mobile phone applications

The mobile phone application has not been developed for a long time. Basically, 2007 when IPhone released by App Inc can be a demarcation point.

Intelligent machine times before IPhone, the feature phones are mainly popular, for which the operating systems of all manufacturers are used. However, they still don't become the mainstream smart phones.

In July, 2008, Apple Inc., also promoted IOS-based program APP Store. From then on, the development of application market was expanded. The significance of IPhone in mobile phone market lies in redefining the smart phones and promoting them to the public. Besides, the standards of APP Store are defined actually so that the users and developers can purchase and sell the software conveniently unprecedentedly.

It's the same for Android market. As for mobile phone companies except Apple Inc., the Android system is adopted for the most of these companies. Though the development platforms are not the same, such an open source development also can be provided for users and developers. Technically, the developer shall mainly give considerations into technical background, target users, market situation and sales status to determine the development platform.

2.1.2 Content of mobile phone video applications

According to the source, the mobile phone videos can be divided into three categories (bzdj, 2016): firstly, as for mobile phone videos based on internet website, they are the business forms generated for expanding business of internet website designated to satisfy the user's mobile demand. Secondly, speaking of mobile phone videos based on mobile phone communication network, China Mobile and Unicom

are video websites provided for users, having certain role in propaganda. Thirdly, as for mobile phone videos based on live streaming network, such videos should rely on ground or satellite live streaming network. Besides, it is necessary to install specific digital TV receiving module on mobile phone to receive TV signals.

According to the content, the mobile phone videos can be mainly divided into mobile phone TV, mobile phone movie, music and MV, network short film, direct live streaming, in which mobile phone TV includes TV drama and variety show. As one of mobile phone TV, the live streaming has been developing robustly in recent two years. an increasing number of merchants direct attentions to it, which is a new breakthrough of video industry.

2.1.3 Market share of mobile phone video applications

Dozens of mobile video applications could be found out in various mobile phone application markets nowadays. Nearly two versions of IOS and Android could be found for each mobile phone video application. By taking APP Store and Bean-shell for example, several mobile phone video applications with large market downloading quantity are concluded. The downloading ranking of mobile phone video applications in Oct, 2016 is as shown in the table2.1.

Mobile phone video application downloading ranking		
Ranking	App Store (Apple)	Bean-shell (Android)
1	IQIYI	Tudou
2	Youku	IQIYI
3	Tencent video	Youku video
4	Imgo TV	Tencent video
5	LeTV	Sohu Video
6	Tudou video	PPTV
7	CCTV	YouTube
8	PPTV	Douyu TV
9	Douyu TV	Huya TV
10	Longzhu TV	YY Live

1.1 mobile phone video application downloading ranking in Oct. 2016

It shows that there is no great difference among users choosing top ten video applications in IOS and Android markets. Nearly top ten mobile video markets owned by several video application manufacturers. Due to the limitation of network home and ten from, YouTube videos cannot be watched in China. However, we can watch the YouTube videos through VPN of Android system, thus YouTube occupies the android market.

2.1.4 Theoretical study on mobile phone video

One of most famous books written by researchers at home and abroad is 《Cell phone: the story of the world's most mobile medium and how it has transformed everything!》 written by Paul Levinson(2004). This book overall analyzes the influences of mobile phone in mass communication activities. In his opinion, two basic communication ways of the humankind include talk and walk,

which were separated on the date when the human being was born. However, after the arrival of mobile phone, the both are combined again.

Mcluhan describes the theory that "media indicates the extension of the human body" in 《Understanding Media: The Extensions of Man》(2011). Once the video business is combined with the terminals with high viscidity to the people's life just like mobile phone, people can get rid of the spatial restraint and can enjoy multimedia experience anytime. As a result, it could be found that the development of mobile phone videos is inevitable.

The studies on mobile phone videos at home are mainly relevant to spreading contents, forms and applications. According to 《Mobile Phone TV: Mobile Revolution of Industrial Integration》 written by Xiao Xuanyi(2008), 《Discussions into Generation and Development Space of Mobile Movies》 written by Jiang Linlin(2007) and 《Video Interaction Media》written by Lei Jianjun(2007). The communication content of mobile phone is divided into four forms such as mobile phone TV, mobile phone movie, mobile phone communication video and mobile phone short film.

Among relevant studies of mobile phone video industry, 《Fault Analysis of Mobile Phone Video Business Development》 written by Guo Faming(2005) analyzes the risks and challenges of mobile phone video business in the future. In 《Fifth Media Principle》 written by Tong Xiaoyu(2006), five W are theoretically described by focusing on dissemination from the structure of dissemination. According to the related articles 《Status, Trend and Operation Model of Mobile Phone TV》written by Zhang Shaodong & Huang Baoxiong (2005),there are certain understandings about the model of mobile phone video industry.

In 《Precision Marketing at Technical Consumption Era-Discussions into the Profit Model of Mobile Phone Advertisement and Market Prospect》, Cheng Wen (2007) thinks that there will be fabulous business opportunities and market prospect of mobile phone advertisement thanks to the intervention of businesses such as video and online game. Mobile phone might be gradually evolved into the emerging media at technical consumption era from the common communication tool.

In 《Empirical Study on Consumer's Attitude towards in-built Advertisements of Mobile Phone Applications》 written by Yu Xiao(2013), empirical study on combination of consumers and their attitude towards advertisement. In 《Empirical Study on User's Willingness to Accept Mobile Phone APP Advertisements》written by Cao Lipu(2016), the user's accepting willingness model is applied into the study on mobile phone APP advertisement.

Through retrieval of literature at home and abroad, the studies on mobile phone video are about technical and marketing. According to the literature studying the consumer's attitude, it's found that it is feasible to carry out research by putting consumer's attitude and accepting willingness to the virtual products, which lays foundation for the study by combining the satisfaction and network virtual products.

2.2 Theoretical Study on Customer Satisfaction

2.2.1 Concept of customer satisfaction

Customer satisfaction originates from America and was born in 1960s and 1970s. After proposed in 《Empirical Study on Customer's Input, Expectation and Satisfaction》 delivered by American famous scholar Cardozo(1965), it arouses the scholars' attentions. Besides, a lot of studies on it have been carried out. The satisfaction describes the difference in consumer's perception into the consumption. That is, the expectation value in advance is different from the actual feeling.

Hunt and Institute (1977) proposed that customer satisfaction was a feeling that the customer had on evaluation of product and service in meeting about study on marketing science in 1977.

Oliver(1981) proposing expectancy disconfirmation model in 1980, she supposes that the consumer's experience in consumption and service is the transient emotional response. She also thinks that customer satisfaction is essentially the emotional state caused by disconformities of actual effect in expected effect of consumption.

Through investigation research in 1982, Churchil and Surprenant(1982) found that the customer's direct expression on products plays a decisive role in satisfaction change.

Tse & Witon (1988) thinks that customer satisfaction refers to the evaluation on differences between expected quality of the product before having purchase behavior and the perceptive quality after consumption.

After studying the patients' satisfaction on two hospitals in 1989, Woodside, Frey and Daly(1989) proposed relation framework among service quality, customer satisfaction and customer behavior and concluded the influences on service marketing.

For the first time, Engel, Blackwell and Miniard (1968) introduced the confidence into the definition of customer satisfaction in《Customer Behavior》. They supposed that customer satisfaction indicated the comparison of actual effect of the product use into the confidence before purchase. The customer satisfaction depends on otherness between the both.

Armstrong and Kotler (2009) proposed difference function between customer's actual perception effect and expectation before purchase in 《Marketing: and Introduction》.

It could be found from above the research that the scholars carry out the research on customer satisfaction from various perspectives. For instance, the states after the customers use the product or service is studied. Even the customer's psychological process when using the product or service is also studied. By combining the research result of the forefathers, it's supposed that customer satisfaction indicates the psychological state that the consumers have after comparing the feeling they have after using the product or service into the expectation before using the product or service. If the using feeling of product or service reaches or exceeds the customer's expectation, "the satisfaction" is obtained, or "dissatisfaction" is obtained. However, the indicator measuring the customer satisfaction refers to the customer satisfaction degree.

In this paper, what the user enjoys is the service related mobile phone video application. Therefore, the rationality of measuring the satisfaction of mobile phone video users through customer satisfaction degree is further verified, which lays theoretical basis for this paper.

2.2.2 Theoretical study on customer satisfaction

The concept of "satisfaction" is from the gradual application of psychology into marketing field. This section is aimed at introducing the theoretical basis of customer satisfaction

Expectancy disconfirmation theory

Oliver（1981） proposes this theory to express that the customer has expectancy value before purchasing product or service and perceived performance about commodity or service after purchase. After comparison of expectancy value into the perceived performance, the result comparison disconformity is disconfirmation, whose degree is related to the customer's expectation and actual perceived performance of the commodity or service. However, the degree of customer satisfaction is related to that of disconfirmation. The theory defines the customer satisfaction as the function of customer expectation and actual perceived performance.

Assimilation

In assimilation theory, when the product performance cannot satisfy or surpass customer's expectation, the imbalance will be generated. However, the customers will adjust their recognition on product when the imbalance is generated so that their recognition further meets their expectation to lower the recognition imbalance.

Comparison theory

As opposite to the assimilation, the comparison theory goes that there exists correlation between customer's expectation and product performance. The customer is inclined to widen the gap when there is difference between expectancy value and performance. That is, the customer will have not good evaluation on product when the

product performance fails to satisfy the customer's expectation. Contrarily, the customer will have better evaluation on product.

Negativism

Carlsmith(1963) proposes negativism for the first time. He supposes that the customer will directly deny the product or service and lower the recognition on performance substantially when the customer's expectation is strong but actual performance cannot satisfy the expectation.

Assimilation-contrast theory

Hovland, Harvey & Sherif(1957) combine assimilation and contrast theory and propose assimilation-contrast theory, which believes that the difference between customer's expectation and actual performance is regarded as the independent variable. The customer satisfaction is the function of this independent variable. According to this theory, the customer's recognition is divided into two regions namely receiving and rejection regions. When the difference between customer's expectation and actual performance is small, the customer will be inclined to shorten the difference between the expectation and performance, which is similar to that of assimilation. However, when the difference is large and lies in the rejection region, the customer will be inclined to enlarge the expectation and performance, which is similar to the contrast theory.

Through review of the psychological theory literatures, the understanding on satisfaction is deepened. Besides, the questionnaire is made and questions are designed with target. As a result, the satisfaction influence factors of mobile phone video users can be studied more efficiently.

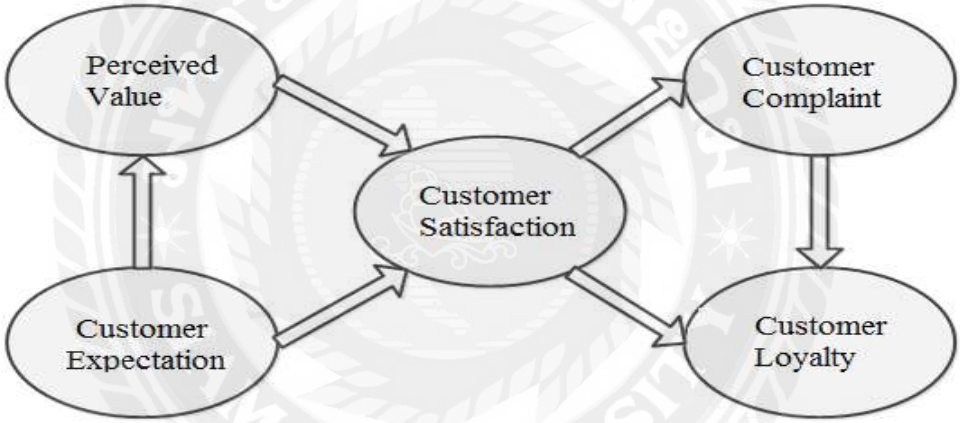
2.2.3 Customer satisfaction model

As the customer satisfaction theory arouses more and more attentions of the enterprises and government, the scholars from around the world have built various customer satisfaction model based on a lot of studies and analyses, in which KANO index model from Japan is a representative one. The mature and widely applied customer satisfaction models are studied in this paper to provide basis and reference for study on satisfaction influence factors of mobile phone video applications.

Sweden customer satisfaction barometer

Sweden is a country building satisfaction index internationally. The American professors including Fomell et al proposed the model in 1989. Thus, the possibility for the consumer's secondary purchase of the product or service can be quantized. In addition, the investment revenue can be reckoned for the enterprise.

The model has total five structural variables: customer expectation, perceived value, customer satisfaction, customer complaint and customer loyalty, in which customer expectation and perceived value are factors influencing customer satisfaction while the customer complaint and customer loyalty are the result of customer satisfaction, as shown in the Fig. 3.1 Sweden customer satisfaction barometer.



2.1 Sweden customer satisfaction model

Customer expectation: the customer makes purchase decision to have positive correlation effect on product's expectancy value, perceived performance and customer satisfaction.

Perceived performance: the customer's overall evaluation on the purchased product is under dual influence of quality and price.

Customer complaint: customer's emotion or behavioral expression that the customer feels unsatisfied with the product, including personal complaint and complaint about enterprise management layer. If the enterprise can handle the

customer complaint properly and immediately, the customer's unsatisfied mood will be mitigated and even might be transformed into the customer loyalty.

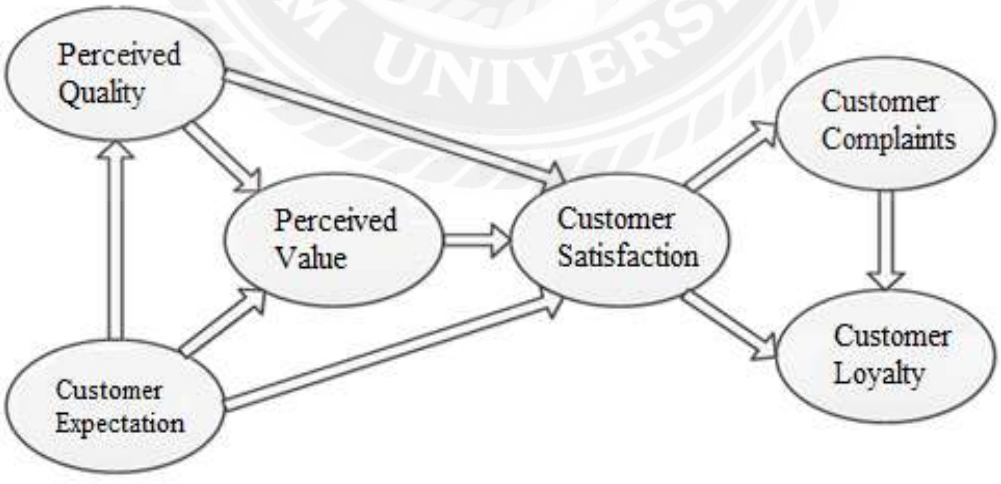
Customer loyalty: including the customer's willingness to buy again and the bearing capacity of the price.

Customer satisfaction, including overall satisfaction and gap between satisfaction with the expectation and customer's ideal product

American customer satisfaction index

Based on the model of SCSB, Fomell combines the American actual situation to obtain American customer satisfaction index ACSI, which is widely applied in many countries and regions. The model is used as the independent variable of perceived quality to study its role on customer satisfaction. It is a macro index measuring economic output value.

The model has total six structural variables: customer expectation, perceived quality, perceived value, customer satisfaction, customer complaint and customer loyalty, in which each variable also contains one or many observational variables, each of which is obtained from the actual investigation data, as shown in the Fig. 2.2 American customer satisfaction index model.



2.2 American customer satisfaction index model

Customer expectation: customer's estimation of the quality of certain product or service before purchase. The customer expectation is measured through three

variables such as product customization expectation, product reliability expectation and overall expectation of product quality.

Perceived quality: customer's actual feeling of the quality after using the product or service. Perceived quality is measured through three variables such as product customization, product reliability feeling and overall feeling of product quality.

Perceived value: subjective feeling manifesting the benefit from the product or service after integrating their quality and price. Perceived value is measured through two variables such as feeling of the quality under given price condition and that of the price under given quality condition.

Customer satisfaction: customer satisfaction is measured through three variables such as the gap between actual feeling and expected quality, that between actual feeling and ideal product and overall satisfaction.

Customer complaint: this structural variable is measured through customer's formal or informal complaint.

Customer loyalty: customer loyalty is the final dependent variable in the model. It is measured through two variables such as the possibility for customer's repeated purchase and bearing capacity of the price change.

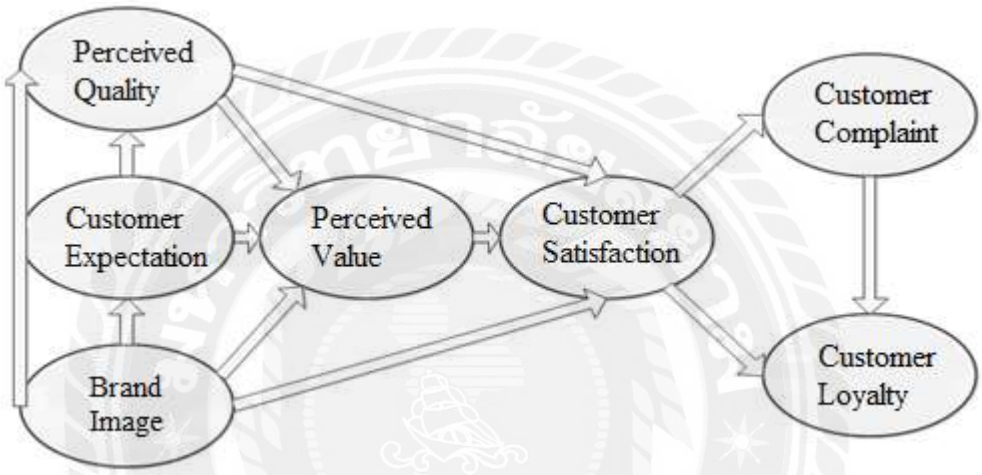
It could be found from the above study that the ordinary satisfaction model will study by integrating the customer complaint and loyalty. However, national satisfaction index model is widely used. It is generally applied to define the variable and describe the measure item and precisely aim at certain specific measure item. However, we can refer to the definition and study of the variable. Especially, when having satisfaction study on certain specific product or service, it's necessary to specify satisfaction influence factors according to the actual features of the product or service and propose specific variable that meets product features so as to realize measurement.

China customer satisfaction index

There is short time for study on customer satisfaction index in China, only about 20 years. It is still at experimental stage. There are few theories and models to

refer to. As far as satisfaction market is concerned, market evaluation mechanism is relatively not perfect and the market acceptance level is low. As a result, the investigation workers are perplexed a lot.

In June, 2000, CNIS applied for subject about study on Chinese consumer satisfaction index from the Ministry of Science and Technology. The subject development meets China's national condition and there is world advanced Chinese customer satisfaction index measurement model, as shown in the Fig. 2.3 China customer satisfaction index model.



2.3 China customer satisfaction index model

Based on American customer satisfaction index, the concept of "brand image" added to Chinese customer satisfaction index, indicating the personality characteristics manifested by the enterprise or certain brand in market and social public. It manifests the evaluation and recognition of the public and especially consumers on the brand. This feature also meets China's corporate image and consumer's consumption psychology. It is further applicable to study on user satisfaction investigation in China area.

It could be found from the study on above-mentioned satisfaction models that the scholars at home and abroad mainly investigate customer satisfaction by focusing on the definition and model of the customer satisfaction. As for definition, the scholars give definite answer: namely the comparison result of consumer's expected value of certain consumption process and actual consumption experience. However,

as for index model, it is still at exploration stage. As for all countries, many theories and technical measurement methods remain supplemented and improved. Therefore, it is a long way to go to deal with study on customer satisfaction.

2.2.4 Study on Satisfaction of mobile phone applications

It could be found through theoretical study on satisfaction model in the previous part that the traditional satisfaction model is applicable to offline purchase or service activity. There is no online activity satisfaction model. Therefore, related literature is consulted to seek some enlightenment from satisfaction of mobile applications. Therefore, simple literature review will be made for study on satisfaction of mobile phone applications.

There are still few studies on satisfaction application of mobile phone APP, mainly studying the user's buy-back willingness factors. Through study on online shops, the scholars including Khan, S. A., Liang, Y., & Shahzad, S. et al(2015) find that seven factors including price, convenience, product information, return policy, financial risk, product risk and delivery risk are key factors influencing customer satisfaction and also influence whether the customer has willingness to buy again.

Judged from the domestic study, there are few studies on satisfaction of mobile phone applications. Though satisfaction model for mobile phone video application is not proposed, some thoughts can be provided for study on satisfaction of mobile phone applications in this paper.

Author	Article	Satisfaction influence factors
Yang Genfu (2015)	Study on mobile reading user satisfaction and continuous using willingness influence factors-by taking content aggregation APP for example	Individualized service quality, interface quality and reading content quality
Zhang Yifan (2015)	Empirical study on user satisfaction of tourism APP in China	Perceived quality, perceived value, customer complaint and brand image
Yang bo (2013)	Study on satisfaction influence factors of mobile phone bank	Empathy, tangibility, ease of use, responsiveness, safety and economy
Li Chenggong (2015)	Empirical study on user satisfaction of mobile phone taxi software	System support, entity service, value perception and usefulness
Lu Liangbing (2010)	Estimation of mobile phone software user experience and predictive effect on using willingness.	Ease of use, demand & emotion, learnability, system support and efficiency
Du Huiran (2015)	Empirical study on satisfaction influence factors of mobile phone reading application	Ease of use, reading content, economy, responsiveness, basic property and individualization

1.2 Summary of influence factors of mobile phone satisfaction in China

Judged from the abovementioned content, China's study on application of satisfaction into the internet field plays a leading role. Chinese scholars' study on satisfaction is increasingly directing attentions to the internet field from entity consumption field, which is greatly helpful to the development of internet industry and study on customer satisfaction.

CHAPTER III

RESEARCH METHOD

3.1 Research design

The purpose of this paper is to study the influence factors of mobile phone video application user satisfaction. Speaking of the study design, the service condition is firstly taken into account and in-depth interview with the surrounding users is conducted. Secondly, the study is hypothesized. Thirdly, the influence factors influencing user satisfaction of the mobile phone video application are collected by handing out questionnaires. Through collection of variables of mobile phone video application APP including basic property, ease of use, responsiveness, watching content, economy, individualization and interactivity according to the users of mobile phone video application, the data is evaluated.

3.2 Interview survey

3.2.1 Interview survey

Before handing out questionnaires, explorative study on surrounding mobile phone video users is carried out through interview. Related information is obtained through personal interview. The surrounding users of mobile phone video application are taken as the interview objects. During the interview, the user interview is held by taking mobile phone application satisfaction investigation factors in China as the basis. The interview content mainly includes following aspects.

Which aspects of mobile phone video application are given attentions?

For which factors do you think you chose the mobile phone video application (mobile phone video application are being used)?

For which aspects of mobile phone video application do you think it is necessary to make improvement or give suggestions.

3.2.2 Interview conclusion

Through personal interview, the influence factors of user satisfaction of mobile phone video applications are preliminarily concluded:

The users mostly give attentions to whether the content of mobile phone video application is rich, free and not smoothly when loading

The users relatively give attentions to the ease of use, of mobile phone video application, basic functions of software and memory space of mobile phone.

The users don't give attentions to the problems about mobile phone video application including ease of use and high efficiency.

The user proposes the interactivity of mobile phone video application and problem about whether the bullet screen is supported.

3.3 Research Hypothesis and Model Building

3.3.1 Research hypothesis

Judged from the abovementioned satisfaction research on mobile phone applications, the satisfaction research on mobile phone video application is not carried out by the academic circle at the present. However, it could be found through interview and investigation that the users relatively give attentions to the problems about mobile phone video application, including whether the content is free, whether it is not unsmooth, ease of use of software, basic functions, memory space and whether the bullet screen is supported. Through analysis on these factors and actual characteristics of mobile phone video application, seven influence factors influencing mobile phone application user satisfaction including basic property, ease of use, responsiveness, watching content, economy, individualization, interactivity. Besides, the hypothesis is proposed based on these seven factors.

Influence factor-Basic property

Mobile phone video application is the application software installed on mobile phone for solving the user's demand for watching videos. The factors of mobile phone video application including the size of installation package, memory

space, stability and whether it is intervened by the advertisement are basic properties influencing the mobile phone video application. The product's basic properties will have influence on using satisfaction of users. Therefore, the hypothesis is proposed.

H1 basic properties of mobile phone video application have positive influences on user satisfaction.

Influence factor-Ease of use

Ease of use has always been the emphasis of the focuses of many fields such as website, software, electronic business and technology. When one new product is put into the market, some products will not be abandoned for not being easy to use, understand or learn. The smart phone has not been popularized and developed for a long time. Meanwhile, lots of users lack experience in using mobile phones. However, along with the accelerated development of the mobile phone video worldwide, there have been numerous forms. Consequently, the attention should have been paid to whether the interface design of mobile phone video application is convenient in using, function button is rational, it is easy to adjust when watching the movie and user can find out the necessary functions easily. Further, the users of mobile phone video application might need to complete the full process of watching, download and paying for video. Therefore, whether the mobile phone video is easy to use has great influences on user's using willingness and satisfaction to a great extent. Therefore, the hypothesis is proposed.

H2 ease of use of mobile phone video application has positive influence on user satisfaction.

Influence factor-Responsiveness

Mobile phone video application is usually applied into occasions such as traffic tools, company, school and home, characterized by fast pace. If there are such situations such as stopping, slow loading speed or interactive operation response when mobile phone video application is used, the user satisfaction will be used. Therefore, the response speed of various operations of mobile phone video application will have influence on using satisfaction. Therefore, the hypothesis is proposed.

H3 responsiveness of mobile phone application has positive influence on user satisfaction.

Influence factor-Watching content

The core products of mobile phone video application are various videos including TV, film, network short film, MV, variety show and live video, etc. There are numerous mobile phone video software applications in APP, having difference in capacity of providing contents. The mobile phone video application within the content cooperation channel will provide more diversified content resources. However, the mobile phone video applications with limited strength can find out the deficiency in content by finding out old videos. Thus, the update speed is slow and user demand cannot be satisfied. The core demand of user for using mobile phone video application is to watch video. If the mobile phone video application can provide the content that the user wants to find out each time, the user's using satisfaction will inevitably be improved. Therefore, the hypothesis is proposed.

H4 Watching content of mobile phone video application has positive influences on user satisfaction.

Influence factor-Economy

One profit channel of mobile phone video application is membership charge and paid video. Though there are lots of videos free for users in mobile phone video application. However, as for the videos of fast update and high quality, it is necessary to pay for such contents as being free of advertisement interference. The price is the manifestation of the product or service value. Whether the product or service is processed rationally is related to whether the enterprise can play a dominant role in market. Besides, it is also the main factor for the consumers to weigh to pay for the product or service. The purchase decision of the consumer will depend on comparison of product price and value. When thinking the product value is higher than its price, the consumer will be more willing to pay. Therefore, the rational member price and paid video price in mobile phone video application is one of main weighing factors for users to choose mobile phone video application. In the meantime, through such forms as the member preference, sales promotion activity and daily task in mobile

phone video application, the user satisfaction will also be improved. Therefore, the hypothesis is proposed.

H5 economy of mobile phone video application has positive influence on user satisfaction.

Influence factor-Individualization

During customers using various software editions, they have their own habit. Personalized recommendation has already been widely applied into various internet products and mobile phone applications through gradual development and popularization. With personalized function in mobile phone video application, the user can have setting according to his hobbies. The mobile phone application manufacturers also can realize personalized recommendation according to the user's behavior data. However, there is difference in functional level of each signal of different mobile phone video applications. The mobile phone video application is more popular by virtue of its strong personalized function. Therefore, the hypothesis is proposed.

H6 Individualization of mobile phone video application has positive influence on user satisfaction.

Influence factor-Interactivity

Video share mode has been developed up to the moment. The users not only have to satisfy the demand for watching movie alone but also need to exchange ideas with the video author. Therefore, it is necessary to provide video demand for the video release to communicate with other users. Most mobile phone video application users turn to mobile phone users from the network users. So, it is inevitable to propose these demands. Meanwhile, the hypothesis is also proposed.

H7 Interactivity of mobile phone video application has positive influence on user satisfaction.

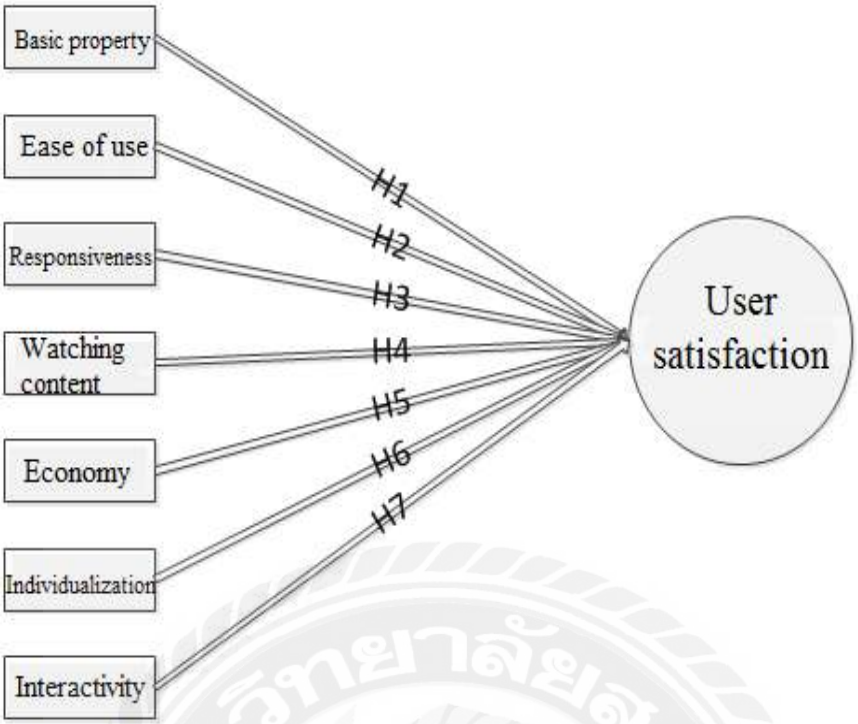
In this paper, total seven hypotheses are proposed, as shown in the table 3.1 namely research hypothesis.

Research Hypothesis	
Hypothesis 1 (H1)	Basic property of mobile phone video application has positive influence on user satisfaction.
Hypothesis 2 (H2)	Ease of use of mobile phone video application has positive influence on user satisfaction.
Hypothesis 3 (H3)	Responsiveness of mobile phone video application has positive influence on user satisfaction.
Hypothesis 4 (H4)	Watching content of mobile phone video application has positive influence on user satisfaction.
Hypothesis 5 (H4)	Economy of mobile phone video application has positive influence on user satisfaction.
Hypothesis 6 (H6)	Individualization of mobile phone video application has positive influence on user satisfaction.
Hypothesis 7 (H7)	Interactivity of mobile phone video application has positive influence on user satisfaction.

1.1 Research hypothesis

3.3.2 Research hypothesis

Among abovementioned seven hypotheses, seven influence factors of mobile phone video application satisfaction can be summarized: basic property, ease of use, responsiveness, watching content, economy, individualization and interactivity. Besides, the model is built, as shown in the following Fig. 3.1 mobile phone video application user satisfaction model:



1.2 mobile phone video application user satisfaction model

3.4 Questionnaire design and data collection

3.4.1 Questionnaire structure

The questionnaire is designed by learning the principle of questionnaire design, referring to related material and having filed interview with the user.

The questionnaire is divided into three parts. Part I: introduction, in which it elaborates the investigator is postgraduate and points out that the questionnaire is completely used for academic research. Personal information of the respondents will not be revealed. Then, it also introduces that the research object of this paper is mobile phone video application and defines the investigation purpose. Next, it emphasizes that the user who didn't use such products don't fill in the questionnaire necessarily to avoid collecting meaningless data. In the end, it reminds that there is no difference among right or wrong answers of the respondents. However, the respondents only can give answers according to the actual feeling.

Part II: 11 basic information to be filled in by the respondents, including sex, age, education background, career, income, frequently used mobile phone video application, using frequency, using time, watching content inclination, mobile phone operator, mobile phone operating system, in which among answers of “frequently used mobile phone video application”, top 10 mobile phone video applications in mobile phone video application market are listed. Besides, the option “others” is filled in the name of other mobile phone video applications out of the scope by the respondent so as to increase the rang e of questionnaire.

Part III: measure scale of mobile phone video application, as aforementioned, it is hard to find out investigation into the satisfaction of mobile phone video application at the present. There is still no realted and mature satisfaction measurement scale. Based on the reference to other satisfaction investigation scales and by combining features and satisfaction influence factors of mobile phone video application and under the help of tutors and students, the questions and verbal tricks of research scale in this paper are completed. Speaking of scoring of measure items, the internationally popular Likert scale is used. As for the answer of each topic, there are five options “satisfied very much”, “satisfied”, “ordinary”, “unsatisfied” and “unsatisfied very much”, which correspond to “5”, “4”, “3” and “2” and “1” respectively as the score.

3.4.2 Measurement item

In research design of this paper, there are seven influence factors of mobile phone video application user satisfaction, according to which corresponding measurement items are set. Besides, through secondary interview, the accuracy of measurement items is confirmed. Ultimately, corresponding measurement items are designed for these seven influence factors.

Basic property

As for the measurement of basic property in this paper, it is mainly represented by the memory of mobile phone, advertisement interference degree and stability of software.

Measurement factors	Topic of measurement items
1. Basic property	Memory space of mobile phone video application
	Little advertisement interference of mobile phone video application
	Good stability of mobile phone video application

1.3 Topics of basic project measurement item

Ease of use

Ease of use generally represents the convenience in using software. It is mainly represented by the convenience in interface design of mobile phone video application. The user can search the content to watch and register and log in conveniently. The column and classification mode can be rationally manifested by these four items.

Measurement factors	Topics of measurement items
2. Ease of use	Interface design of mobile phone video application is convenient in using
	The content to watch can be searched.
	The registration and login function of mobile phone video application is convenient in using.
	The column and classification of mobile phone video application is rational.

1.4 Topic of measurement item ease of use

Responsiveness of mobile phone video application manifests by smooth and fast operation responses, which is mainly represented by four items such as opening speed, video loading speed, response speed of various operations and character & illustration loading speed.

Measurement factors	Topic of measurement items
3. Responsiveness	Opening speed of mobile phone video application is fast
	Video loading speed of mobile phone video application is fast
	Operation responses of mobile phone video application is fast
	Character and illustration loading speed of mobile phone video application is fast

1.5 Topic of measurement item responsiveness

Video content

Video content is usually the core part of mobile phone video application. It is mainly manifested by whether the content is diversified, the content quantity is sufficient, content quality is high, content update is immediately and the exclusively and first released content is available.

Measurement factors	Topic of measurement item
4. Video content	Content of mobile phone video is rich.
	Content quantity of mobile phone video application is sufficient.
	Content quality of mobile phone video content is good.
	Content update of mobile phone video application is immediate.
	Exclusively and first released video is available for mobile phone video application and is rich.

1.6 Topic of measurement item video content

Economy

Economy of mobile phone video application is represented by purchase video, member discounting, sales promotion activity and preference brought to the users.

Measurement factors	Topic of measurement items
5. Economy	Paid video price of mobile phone video application is rational.
	Membership charge preference of mobile phone video application is large.
	Discounting and sales promotion activities of mobile phone video application can bring about material benefit.
	Completion of tasks including signing or comment can bring about preference.

1.7 Topic of measurement item economy

Personalization

Personalized function of mobile phone video application is to push video content, customize favorable content and record user's habits and hobbies.

Measurement factors	Topic of measurement items
6. Personalization	Mobile phone video application can push my favorable content to me.
	I can customize favorable content according to the requirements.
	Mobile phone video application can record my using habit.

1.8 Topic of measurement item personalization

Interactivity

Interactivity of mobile phone video application is mainly represented by communication among users and between user and video author.

Measurement factors	Topic of measurement items
7. Interactivity	I can upload message to video author and get feedback
	I can leave message to other users watching the video and get feedback

1.9 Topic of measurement item interactivity

Overall satisfaction

As for measurement of user's overall satisfaction with mobile video application, by referring to the measurement scale of customer satisfaction of Oliver Richard and combining the mobile phone video application, the two measurement items are proposed.

Measurement factors	Topic of measurement item
8. Overall satisfaction	This mobile phone video application can satisfy my demand.
	I'm satisfied with every aspect of mobile phone video application

1.10 Topic of measurement item overall satisfaction

The above 8 parts indicate all measurement items in scale of questionnaire.

3.4.3 Sample Selection and Sampling Methods

This article sets all the friends and classmates using mobile video software around as a sample for research. A total of 200 questionnaires were issued.

This paper uses a random sampling method. Remove unqualified questionnaires and answers for data analysis.

3.4.4 Data collection

Mobile phone video application is one of applications for every mobile phone. Therefore, the investigation is made by issuing questionnaires stochastically. Questionnaire is made with "questionnaire star". Besides, each question is set as required to ensure the completeness of questionnaire.

Total 146 questionnaires were received from Oct., 12, 2016 to Oct., 19, 2016. Among recycled questionnaires, one disqualified questionnaire was eliminated after carefully examined. Thus, there were 145 effective questionnaires. The questionnaire content will be analyzed as the sample of this paper, which shall be referred to the table 3-10 namely the statistics of sample recycling.

200 questionnaires			146 recycled quantity
	Effective questionnaires	Ineffective questionnaires	Total number
number of recycled samples	145	1	146
Recovery rate	72.50%	0.50%	73.00%

1.11 Statistics of sample recycling

CHAPTER IV

DATA ANALYSIS

4.1 Descriptive statistical analysis

4.1.1 The basic characteristics of the sample

145 effective questionnaires are recycled. The sample distribution of each is rational. The specific data is as shown in the following table 4.1 sample distribution of basic information.

Basic information distribution statistics			
Questions	**Options**	**Frequency**	**Percentage**
Sexual	Male	58	40.00%
	Female	87	60.00%
Age	Below 18 years old	2	1.38%
	19~25	65	44.83%
	26~35	60	41.38%
	36~60	17	11.72%
	Above 60 years old	1	0.69%
Education degree	Below senior high school	12	8.28%
	College	33	22.76%
	Bachelor	64	44.14%
	Master	35	24.14%
	Doctor	1	0.69%
Occupation	Governmental staff	6	4.14%
	Company staff	56	38.62%
	Self-employed	8	5.52%
	Student	44	30.34%
	Others	31	21.38%

Monthly income	Below 2000 Yuan	43	29.66%
	2001-5000 Yuan	53	36.55%
	5001-8000 Yuan	28	19.31%
	8001-15000 Yuan	12	8.28%
	Above 15000 Yuan	9	6.21%
Mobile phone video APP frequently used	YouTube	13	8.97%
	Tencent video	19	13.10%
	Youku	30	20.69%
	Sohu Video	3	2.07%
	IQIYI	55	37.93%
	Baidu Video	2	1.38%
	LeTV	5	3.45%
	PPTV	0	0.00%
	Douyu TV	7	4.83%
	Panda TV	1	0.69%
	Fengyu Live	0	0.00%
	Huya Live	1	0.69%
	Longzhu Live	1	0.69%
	Others	9	6.21%
Frequency	Used every day	82	56.55%
	Once every 1-2 days	22	15.17%
	Once 3-5 days	24	16.55%
	Fewer	17	11.72%
Hours of use	Within one hour	44	30.34%
	1-2 hours	60	41.38%
	3-5 hours	26	17.93%
	More than 5 hours	15	10.34%

Intended use	TV drama	57	39.31%
	Movie	26	17.93%
	Network short film	10	6.90%
	MV	4	2.76%
	Variety show	34	23.45%
	Live streaming	11	7.59%
	News	1	0.69%
	Games	1	0.69%
	Animation	1	0.69%
Mobile phone operator	China Mobile	88	60.69%
	China Unicom	21	14.48%
	China Telecom	11	7.59%
	TRUE MOVE	8	5.52%
	DTAC	14	9.66%
	Others	3	2.07%
Mobile phone operating system	IOS	83	57.24%
	Android	51	35.17%
	Windows phone	5	3.45%
	Others	6	4.14%

1.1 Basic Information Sample Distribution

Firstly, judged from the perspective of sex, 40% of respondents are males while 60% are females, which indicate the females using mobile phone video application accounts for a large proportion. judged from the perspective of age distribution, the respondents aged 19-25 and 26-35 account for 86.21% of the total respondents. There are more mobile phone application suitable for young people. meanwhile, judged from four sample distribution of age, career, education level and income, most users of mobile phone video application are young students and office

workers. They are more familiar with mobile phone and internet and use it more frequently.

It could be seen from the statistics of "frequently used mobile phone video APP" that IQIYI is one of mostly used mobile phone video APP. According to the distribution result of "intended use", those watching TV variety show account for more than half of total, which also conforms to the push content of IQIYI.

Speaking of using frequency and hours of use, the proportion of those using mobile phone video application every day reaches 56.55% and that using it for 1-2 hour every time reaches 41.38%. it indicates that the mobile phone video application features high using frequency and strong viscosity.

Judged from the perspective of operating system and operator's statistical distribution, the number of those using China Mobile and IOS is the highest, which also meets the consumption habit and brand awareness in current society.

The statistics of various basic information of sample is generally rational, which conforms to the practical experience and features high reliability.

4.1.2 Statistical distribution of measurement items

The number of measurement items of questionnaire is 27, whose data statistics is as shown in following table 4-2 statistical data of measurement items in questionnaire.

Topics	Options	Frequency	Percentage	Average value	Standard deviation
1. Satisfaction with the memory of mobile phone video application in mobile phone	Very unsatisfied	5	3.45%	3.26	0.905
	Unsatisfied	16	11.03%		
	Ordinarily	74	51.03%		
	Satisfied	36	24.83%		
	Very unsatisfied	14	9.66%		
2. Satisfaction with the advertising quantity or frequency in mobile	Very unsatisfied	21	14.48%	2.74	1.202
	Unsatisfied	51	35.17%		
	Ordinarily	32	22.07%		

phone video application when watching the video	Satisfied	27	18.62%		
	Very unsatisfied	14	9.66%		
3. Satisfaction with stability of mobile phone video application	Very unsatisfied	3	2.07%	3.66	0.877
	Unsatisfied	10	6.90%		
	Ordinarily	41	28.28%		
	Satisfied	71	48.97%		
	Very unsatisfied	21	13.79%		
4. Satisfaction with interface design of mobile phone video application	Very unsatisfied	1	0.69%	3.85	0.785
	Unsatisfied	5	3.45%		
	Ordinarily	36	24.83%		
	Satisfied	76	52.41%		
	Very unsatisfied	27	18.62%		
5. Satisfaction with search function of mobile phone video application	Very unsatisfied	5	3.45%	3.61	0.915
	Unsatisfied	8	5.52%		
	Ordinarily	46	31.72%		
	Satisfied	66	45.52%		
	Very unsatisfied	20	13.79%		
6. Satisfaction with registration and login function mobile phone video application	Very unsatisfied	2	1.38%	3.6	0.938
	Unsatisfied	14	9.66%		
	Ordinarily	50	34.48%		
	Satisfied	53	36.55%		
	Very unsatisfied	26	17.93%		
7. Satisfaction with column and classification way of mobile phone video application	Very unsatisfied	2	1.38%	3.71	0.849
	Unsatisfied	7	4.83%		
	Ordinarily	46	31.72%		
	Satisfied	66	45.52%		
	Very unsatisfied	24	16.55%		
8. Satisfaction with opening speed of mobile phone video application	Very unsatisfied	4	2.76%	3.58	0.918
	Unsatisfied	13	8.97%		
	Ordinarily	41	28.28%		
	Satisfied	69	47.59%		
	Very unsatisfied	18	12.41%		
9. Satisfaction with video loading speed	Very unsatisfied	3	2.07%	3.46	0.928
	Unsatisfied	19	13.10%		
	Ordinarily	48	33.10%		
	Satisfied	59	40.69%		

	Very unsatisfied	16	11.03%		
10. satisfaction with various operating responses	Very unsatisfied	3	2.07%	3.56	0.881
	Unsatisfied	12	8.28%		
	Ordinarily	48	33.10%		
	Satisfied	65	44.83%		
	Very unsatisfied	17	11.72%		
11. Satisfaction with character and illustration loading speed	Very unsatisfied	3	2.07%	3.58	0.879
	Unsatisfied	12	8.28%		
	Ordinarily	45	31.03%		
	Satisfied	68	46.90%		
	Very unsatisfied	17	11.72%		
12. Satisfaction with diversity of mobile phone video application	Very unsatisfied	2	1.38%	3.73	0.835
	Unsatisfied	7	4.83%		
	Ordinarily	42	28.97%		
	Satisfied	71	48.97%		
	Very unsatisfied	23	15.86%		
13. Satisfaction with video content quantity in mobile phone video application	Very unsatisfied	2	2.00%	3.66	0.877
	Unsatisfied	10	6.90%		
	Ordinarily	47	32.41%		
	Satisfied	63	43.45%		
	Very unsatisfied	23	15.86%		
14. Satisfaction with quality of video content in mobile phone video application	Very unsatisfied	1	0.69%	3.73	0.802
	Unsatisfied	8	5.52%		
	Ordinarily	41	28.28%		
	Satisfied	74	51.03%		
	Very unsatisfied	21	14.48%		
15. Satisfaction content upgrading speed of with mobile phone video application	Very unsatisfied	1	0.69%	3.71	0.905
	Unsatisfied	12	8.28%		
	Ordinarily	44	30.34%		
	Satisfied	59	40.69%		
	Very unsatisfied	29	20.00%		
16. Satisfaction with exclusively released video of mobile phone video application	Very unsatisfied	3	2.07%	3.59	0.968
	Unsatisfied	14	9.66%		
	Ordinarily	49	33.79%		
	Satisfied	52	35.86%		
	Very unsatisfied	27	18.62%		
17. Satisfaction with the	Very unsatisfied	15	10.34%	3.05	1.132

price of charged video of mobile phone video application	Unsatisfied	28	19.31%		
	Ordinarily	53	36.55%		
	Satisfied	33	22.76%		
	Very unsatisfied	16	11.03%		
18. Satisfaction with membership charging preference of mobile phone video application	Very unsatisfied	12	8.28%	3.11	1.087
	Unsatisfied	25	17.24%		
	Ordinarily	60	41.38%		
	Satisfied	31	21.38%		
	Very unsatisfied	17	11.72%		
19. Satisfaction with sales promotion activities of mobile phone video application	Very unsatisfied	10	6.90%	3.09	1.027
	Unsatisfied	25	17.24%		
	Ordinarily	67	46.21%		
	Satisfied	28	19.31%		
	Very unsatisfied	15	10.34%		
20. Satisfaction with completion of tasks mobile phone video application including signing or comment and the obtained preference	Very unsatisfied	6	4.14%	3.25	0.99
	Unsatisfied	22	15.17%		
	Ordinarily	64	44.14%		
	Satisfied	36	24.83%		
	Very unsatisfied	17	11.72%		
21. Satisfaction with the content pushed by mobile phone video application	Very unsatisfied	4	2.76%	3.37	0.95
	Unsatisfied	21	14.48%		
	Ordinarily	52	35.86%		
	Satisfied	53	36.55%		
	Very unsatisfied	15	10.34%		
22. Satisfaction with customized program or classification in mobile phone video application	Very unsatisfied	4	2.76%	3.46	0.92
	Unsatisfied	15	10.34%		
	Ordinarily	53	36.55%		
	Satisfied	57	39.31%		
	Very unsatisfied	16	11.03%		
23. Satisfaction with recordable and usable habit function of mobile phone video application	Very unsatisfied	3	2.07%	3.74	0.831
	Unsatisfied	12	8.28%		
	Ordinarily	48	33.10%		
	Satisfied	65	44.83%		
	Very unsatisfied	17	11.72%		
24. Satisfaction with communication with	Very unsatisfied	2	1.38%	3.43	0.832
	Unsatisfied	10	6.90%		

video author, upload or video anchor	Ordinarily	72	49.66%		
	Satisfied	45	31.03%		
	Very unsatisfied	16	11.03%		
25. Satisfaction with communication with other video audiences	Very unsatisfied	0	0.00%	3.49	0.809
	Unsatisfied	14	9.66%		
	Ordinarily	61	42.07%		
	Satisfied	55	37.93%		
	Very unsatisfied	15	10.34%		
26. Satisfaction with demand of mobile phone video application	Very unsatisfied	0	0.00%	3.68	0.781
	Unsatisfied	9	6.21%		
	Ordinarily	48	33.10%		
	Satisfied	69	47.59%		
	Very unsatisfied	19	13.10%		
27. Overall satisfaction with mobile phone video application	Very unsatisfied	3	2.07%	3.61	0.81
	Unsatisfied	6	4.14%		
	Ordinarily	50	34.48%		
	Satisfied	71	48.97%		
	Very unsatisfied	15	10.34%		

1.2 namely statistical data of measurement items in questionnaire

Judged from the perspective of statistical data of measurement items in questionnaire, the measurement result score of measurement items are among 3 to 4 except “satisfaction with the advertising quantity or frequency of mobile phone video application when watching video”.

4.2 Reliability analysis

Reliability indicates the stability, consistency and reliability of the result measured with test or scale tool. It is mainly represented by whether the result is the same under different measuring environment after data analysis. The more reliable the scale is the smaller the standard error of the measurement through scale. During the measurement, the reliability result will be influenced by the measuring length, homogeneity of sample, measuring difficulty, objectiveness of scoring and statistical method of reliability.

The method of reliability analysis includes test-rest reliability, parallel-forms reliability, split-half reliability and Cronbach α reliability coefficient. In this paper, Cronbach α reliability coefficient is mainly used for reliability analysis. As the most frequently adopted reliability coefficient, it is used to evaluate consistency of scores in scale, belonging to consistency coefficient. such reliability measurement method is generally applicable to reliability analysis of documents such as investigation into the attitude and opinion. Therefore, it is suitable for the research in this paper.

Cronbach α is 0-1. The larger the reliability coefficient the larger its reliability is. Meanwhile, Cronbach α of total scale is larger than 0.8. however, when $0.7<\alpha<0.8$, it indicates the reliability is acceptable. When $\alpha<0.7$, it indicates that it is necessary to further revise the scale. When $\alpha<0.5$, it indicates the reliability is not credible.

Overall reliability of each variable in this paper is as shown in the following table 4.3 overall reliability

Reliability statistics		
Cronbach coefficient	Cronbach coefficient based on standard project	Number of items
.968	.970	27

1.3 Overall credibility

The credibility analysis of each variable in this paper is as shown in the following table 4.4 Cronbach α value of variable.

Variable	Number of measure item	Cronbach α value after the measure item is deleted	Cronbach α of all variables
Basic property	1	0.967	0.73

	2	0.968	
	3	0.968	
Ease of use	4	0.967	0.85
	5	0.967	
	6	0.967	
	7	0.967	
Responsiveness	8	0.967	0.915
	9	0.967	
	10	0.966	
	11	0.967	
Video content	12	0.967	0.901
	13	0.966	
	14	0.967	
	15	0.968	
	16	0.967	
Economy	17	0.967	0.878
	18	0.968	
	19	0.967	
	20	0.968	
Individualization	21	0.967	0.827
	22	0.967	
	23	0.968	
Interactivity	24	0.967	0.867
	25	0.967	
Overall satisfaction	26	0.967	0.902
	27	0.967	

1.4 Cronbach α of variable

It can be seen from the foregoing two tables that Cronbach α of the scale in this paper is 0.968, which is within the same region with Cronbach α 0.970 based on standard item. Besides, it is higher than 0.8. In the meantime, as for Cronbach α coefficient of seven factors studied in this paper, that of basic property is 0.73 while that of others is higher 0.8. It thus indicates that the scales in this paper feature high reliability.

4.3 Validity analysis

Validity indicates the valid degree of measurement and the accuracy and usefulness of a test. The classification of validity includes content validity, criterion-related validity and structure validity. Among validity analysis methods, it is the common analysis method for the factor analyst. The common factor among variables can be abstracted through factor analysis. The original relatively complicated structure is represented with few dimensionalities to transform several measurement items into several mutually related factors.

Before factor analysis, it is necessary to implement KMO and Bartlett test of sphericity. Speaking of judgment criterion, when the more the value of KMO tends to be 1 the more proper it will be to adopt factor analysis to study the surface modified item. When the statistics of KMO is above 0.9, it indicates it is proper to adopt factor analysis for modification. If KMO is between 0.8 and 0.9, it indicates that it is proper to adopt factor analysis to analyze the variable. If KMO is between 0.7 and 0.8, it indicates that the appropriateness of the variable is ordinary. If KMO is smaller than 0.7, it indicates it is not proper to adopt factor analysis for the variable. Bartlett star test is applicable to testing whether each variable is independent respectively. It is required that the obtained numerical value shall be smaller than the regulated significance level.

The validity of measurement is tested through factor analysis in this paper, it’s concluded that KMO measure and Bartlett sphericity test is as shown in the table 4.5 KMO measure and Bartlett sphericity test.

KMO and Bartlett test		
KMO		0.940
Bartlett sphericity degree test	The card read last time	3578.340
	Degree of freedom	351
	Significance	0.000

1.5 KMO measure and Bartlett sphericity test

It can be seen from the above table that KMO value is 0.94 and the significance of Bartlett sphericity degree test is 0.000＜0.05 which indicates that it is proper to adopt factor analysis to test the measure item in this paper.

Afterwards, the measure item in this paper is tested through factor analysis. The rotated component matrix is as shown in table 4.6 Rotated component matrix -1.

Rotated component matrix [a]

	Element			
	1	2	3	4
Satisfaction with the demands of mobile phone video application	.766			
Satisfaction with the record and use habit functions of mobile phone video application	.730			
Satisfaction with content update speed of mobile phone video	.723			

application				
Satisfaction with the video content quality in mobile phone video application	.703			
Overall satisfaction with the mobile phone video application	.679			
Satisfaction with the quantity of video content in mobile phone video application	.625			
Satisfaction with diversity of content of mobile phone video application	.609	.529		
Satisfaction with search function of mobile phone video application	.583			
Satisfaction with videos exclusively released for mobile phone video application	.557			
Satisfaction with column and classification method of mobile phone video application	.534	.524		
Satisfaction with customized program or classification in mobile phone video application				
Satisfaction with opening speed of mobile phone video application		.737		
Satisfaction with video loading speed		.691		
Satisfaction with registration and login function of mobile phone video application		.676		
Satisfaction with the stability of mobile phone video application		.673		
Satisfaction with various operation responses		.663		
Satisfaction with character and illustration loading speed		.599		
Satisfaction with interface design of mobile phone video application		.574		
Satisfaction with memory space of mobile phone video application in mobile phone		.571	.520	
Satisfaction with membership charging preference of mobile phone video application			.866	
Satisfaction with discounting and sales promotion activity of mobile phone video application			.752	

Satisfaction with charged video price of mobile phone video application			.751	
Satisfaction with advertisement quantity or frequency of mobile phone video application at the time of video watching			.588	
Satisfaction with content of pushed to mobile phone video application			.515	
Satisfaction with communication with video author, upload or video anchor				.755
Satisfaction with the completion of tasks including signing or comment of mobile phone video application and obtained preference				.771
Satisfaction with communication with other video audiences				.607

Abstraction method: principal component analysis

Rotation method: Kaiser standardized maximal square difference

a. The rotation has been converged after iterated for 11 times.

1.6 Rotated component matrix-1

After data smaller 0.5 in table is deleted, it is found that there are two situations. For example, there are many factors surpassing 0.5 for some measure items and the capacity of all measure items is smaller than 0.5. After the measure item in this part is deleted, the factor analysis is adopted. The deleted questions include “satisfaction with the diversity of the content of mobile phone video application”, “satisfaction with the column and classification way of mobile phone video application”, “satisfaction with customized program or classification in mobile phone video application”, “satisfaction with the memory space of mobile phone video application in mobile phone”. The result of the second factor analysis is as shown in the table 4.7 Rotated component matrix -2.

Rotated component matrix [a]

	Elements			
	1	2	3	4
Satisfaction with the demands of mobile phone video application	.788			
Satisfaction with content update speed of mobile phone video application	.738			
Satisfaction with record and using habit function of mobile phone video application	.736			
Satisfaction with the quality of video content in mobile phone video application	.711			
Overall satisfaction with mobile phone video application	.704			
Satisfaction with search function of mobile phone video application	.563			
Satisfaction with the quantity of video content in mobile phone video application	.557			
Satisfaction with video exclusively released in mobile phone video application	.545			
Satisfaction with opening speed of mobile phone video application		.779		
Satisfaction with video loading speed		.712		
Satisfaction with operation responses		.703		
Satisfaction with stability of mobile phone video application		.680		
Satisfaction with registration and login function of mobile phone video application		.664		
Satisfaction with character and illustration loading speed		.624		

Satisfaction with interface design of mobile phone video application		.576		
Satisfaction with membership charging preference of mobile phone video application			.874	
Satisfaction with discounting and sales promotion activities of mobile phone video application			.780	
Satisfaction with charged video price of mobile phone video application			.757	
Satisfaction with advertisement quantity or frequency of mobile phone video application at the time of watching movie			.568	
Satisfaction with the content pushed by mobile phone video application				
Satisfaction with communication with video author, upload or video anchor				.758
Satisfaction with completion of tasks including signing or comment of mobile phone video application and obtained preference				.744
Satisfaction with communication with other video audiences				.595
Abstraction method: principal component analysis Rotation method: Kaiser standard maximum variance method a. rotation has been converged after iterated for 9 times				

1.7 Rotated component matrix -2

After delete measure item with capacity smaller than 0.5 “satisfaction with the content pushed by the mobile phone video application”, the result of the factor analysis is as shown in the table 4.8 Rotated component matrix -3.

Rotated component matrix [a]

	Elements			
	1	2	3	4
Satisfaction with the demands of mobile phone video application	.791			
Satisfaction with content update speed of mobile phone video application	.741			
Satisfaction with record and using habit function of mobile phone video application	.736			
Satisfaction with the quality of video content in mobile phone video application	.718			
Satisfaction with	.709			
Satisfaction with search function of mobile phone video application	.572			
Satisfaction with the quantity of video contents in mobile phone video application	.567			
Satisfaction with the video exclusively released for mobile phone video application	.551			
Satisfaction with opening speed of mobile phone video application		.783		
Satisfaction with video loading speed		.711		
Satisfaction with various operation responses		.696		
Satisfaction with the stability of mobile phone video application		.689		
Satisfaction with the registration and login function of mobile phone video application		.672		

Satisfaction with character and illustration loading speed		.611		
Satisfaction with interface design of mobile phone video application		.563		
Satisfaction with membership charging preference of mobile phone video application			.869	
Satisfaction with discounting and sales promotion activities of mobile phone video application			.781	
Satisfaction with charged video price of mobile phone video application			.757	
Satisfaction with advertisement quantity or frequency of mobile phone video application at the time of watching TV			.577	
Satisfaction with				.756
Satisfaction with the completion of tasks including signing or comment of mobile phone video application and obtained preference				.754
Satisfaction with communication with other video audiences				.596
Abstraction method: principal component analysis Rotation method: Kaiser standard maximum variance method a. rotation has been converged after iterated for 8 times				

1.8 Rotated component matrix-3

Through factor analysis, it is found that four factors are abstracted. The capacity of each measure item is above 0.5, which proves that the structure validity of questionnaire is desirable. The design of influence factor and measure item studied in

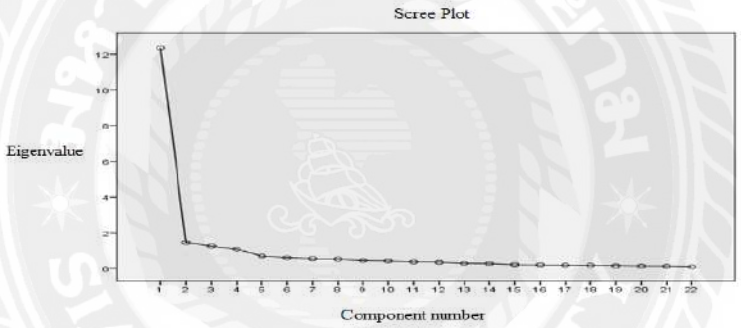
this paper is confirmed. Through analysis on measure items according to the abovementioned analysis result, four factors in this paper are concluded, as shown in the table 4.9 factors and corresponding measure items.

Basic property and video content	Satisfaction with demands of mobile phone video application Satisfaction with content update speed of mobile phone video application Satisfaction with record & using habit function of mobile phone video application Satisfaction with the quality of video contents in mobile phone video application Overall satisfaction with the mobile phone video application Satisfaction with search function of mobile phone video application Satisfaction with the quantity of video contents in mobile phone video application Satisfaction with video exclusively released for mobile phone video application
Responsiveness and ease of use	Satisfaction with opening speed of mobile phone video application Satisfaction with video loading speed Satisfaction with operation responses Satisfaction with the stability of mobile phone video application Satisfaction with the registration and login function of mobile phone video application Satisfaction with character and illustration loading speed Satisfaction with interface design of mobile phone video application
	Satisfaction with membership charging preference of mobile phone video application Satisfaction with discounting and sales promotion activities of mobile phone video application Satisfaction with charged video price of mobile phone video application

Economy	Satisfaction with the advertisement quantity or frequency of mobile phone video application at the time of watching movie
Interactivity	Satisfaction with communication video author, upload or video anchor Satisfaction with the completion of tasks including signing or comment of mobile phone video application and obtained preference Satisfaction with the communication with other video audiences

1.9 Factors and corresponding measure items

Through scree plot, it can be found that the eigenvalue of the horizontal axis 1-4 exceeds 1 and is smaller than 1 and also becomes flat gradually from 5, which meets the result of factor analysis. Please refer to the 4.10 scree plot.



1.10 Scree plot

4.4 Correlation analysis

Correlation analyst studies whether there exists certain dependence relationship among variables and discusses the direction and degree of correlation according to the phenomenon of specific dependence relationship, which is the statistical method for studying the intimate level among variables. The correlativity of two variables is judged through correlation coefficient. The value of correlation coefficient is between -1 and +1, in which positive sign just represents positive correlation while the negative one represents the negative correlation. The more the absolute value of coefficient approaches 1 the higher the correlation of variable. The closer the correlation coefficient approaches 0 the lower the correlation among variables.

There are 22 measure items left after 27 deleted in this paper. Four factors are obtained through analysis, including basic property & video content, responsiveness & ease of use, economy and interactivity. The measure items are now concluded into four factors. The correlation among factors and between factor and overall satisfaction is weighed through Pearson simple correlation coefficient. Please refer to the table 4.11 factor correlation analysis.

Factor correlation analysis

		Basic property and video content	Responsiveness and ease of use	Economy	Interactivity	Overall satisfaction
Basic property and video content	Pearson correlation	1	.000	.000	.000	.786**
	Significance (double tail)		1.000	1.000	1.000	.000
	N	145	145	145	145	145
Responsiveness and ease of use	Pearson correlation	.000	1	.000	.000	.235**
	Significance (double tail)	1.000		1.000	1.000	.004
	N	145	145	145	145	145
Economy	Pearson correlation	.000	.000	1	.000	.255**
	Significance (double tail)	1.000	1.000		1.000	.002
	N	145	145	145	145	145
Interactivity	Pearson	.000	.000	.000	1	.377**

	correlation					
	Significance (double tail)	1.000	1.000	1.000		.000
	N	145	145	145	145	145
Overall satisfaction	Pearson correlation	.786**	.235**	.255**	.377**	1
	Significance (double tail)	.000	.004	.002	.000	
	N	145	145	145	145	145

**. When the confidence coefficient (double-measurement) is 0.01, correlation is significant.

1.11 Factor correlation analysis.

Pearson correlation coefficient of user's overall satisfaction of mobile phone video application is basic property and video content 0.786 **, indicating there is positive strong correlation between it and overall satisfaction; responsiveness and ease of use 0.235**, indicating there is positive strong correlation between it and overall satisfaction; economy 0.255**, indicating there is positive strong correlation between it and overall satisfaction; interactivity 0.377**, indicating there is positive strong correlation between it and overall satisfaction. The significance of above 4 influence factors is smaller than 0.05, passing through correlation test. According to the sequence, correlation of four factors is:

Basic property and video content 0.786** ＞ interactivity 0.377** ＞ economy 0.255**＞responsiveness & ease of use 0.235**

To conclude, there is positive correlation among 4 influence factors of user satisfaction of mobile phone video application and overall satisfaction studied in this paper, having positive influence on it. It is appropriate to build regression equation through aforementioned variable and overall satisfaction and carry out regression analysis.

4.5 Regression analysis

Regression analysis, indicating the statistical analysis for determine the interdependent quantitative relation between two or more than two variables, is a widely applied data statistics method. To measure the influence of influence factors of mobile phone reading application user satisfaction, seven factors are used as independent variables. Overall satisfaction of mobile video application is used as dependent variable to carry out multiple regression analysis. The model is as described as below:

Y=a1x1+a2x2+a3x3+a4x4

Y refers to the overall user satisfaction of mobile phone video application.

ε refers to the constant term.

a_1, a_2, a_3, a_4 correspond to regression coefficient of x_1(basic performance and video content), x_2(responsiveness and ease of use), x_3(economy), x_4(Interactivity) respectively. The regression coefficient is the parameter that the independent variable affects the dependent variable, and the value of the regression coefficient is the ratio of the dependent variable caused by the change of an independent variable under the condition that the independent variable size is constant. In this paper, SPSS22.0 software is used to carry out multivariate linear regression. The results are shown in table4.10, goodness of fit test. And table 4.12, ANOVAa

Model Abstract				
Model	R	R square	R square after adjustment	Error in standard estimation
1	.938[a]	.880	.877	.35119444
a. Predictive variable: (constant), interactivity, economy, responsiveness and ease of use, basic property and video content b. Dependent variable: overall satisfaction				

1.12 Model test of goodness of fit

In table 4.12, the connotation of data in proper order: multiple correlation coefficient of dependent and independent variables, determination coefficient R square, standard estimation error of regression equation of adjusted determination coefficient R. in multiple regression, R determination coefficient is used to explain the proportion of variation of independent variable in regression model into the variation of dependent variable. The determination coefficient R square in this paper is 0.938 and adjusted R is 0.88, which indicates that interactivity, economy, responsiveness & ease of use, basic property & video content can have 88% explanation to the total variation process of user satisfaction of mobile phone video application with dependent variable. Therefore, it is believed that the fitting degree of the model and data is quite high.

ANOVA[a]						
Model		Sum of squares	Degree of freedom	Mean square	F	Significance
1	Regression	126.733	4	31.683	256.882	.000[b]
	Residual error	17.267	140	.123		
	Total	144.000	144			

a. Dependent variable: overall satisfaction

b. Predictive variable: (constant), interactivity, economy, responsiveness and ease of use, basic property and video content

1.13 ANOVA[a]

The connotation of data items in each row in table 4-13 is: variation source of variable, sum of squares of deviation, degree of freedom, variance, observed and significant regression significance test F test statistics. It can be seen that the total sum of total deviation square is 144 and that of regression square 126.733, that of mean of regression variance 31.683, that of residual square 17.267 and mean of residual variance 0.123. The observed value of F test statistics in regression equation significance test is 256.882, significance 0.000 and significance level smaller than 0.01, which indicates that the overall explained variation amount of regression equation reaches significance level. The independent and dependent variables constitute linear relation. Meanwhile, the imitative effect is good and linear model can also be built.

coefficient [a]

Model		Nonstandard coefficient		Standard coefficient	t	Significance
		B	Standard error	Beta		
1	(Constant)	1.594E-18	.029		.000	1.000
	Basic performance and video content	.786	.029	.786	26.843	.000
	Responsiveness	.235	.029	.235	8.040	.000

and ease of use					
Economy	.255	.029	.255	8.728	.000
Interactivity	.377	.029	.377	12.891	.000
a. Dependent variable: overall satisfaction					

1.14 Multiple regression coefficient

Through 4.14 Multiple regression coefficient, it can be found that the significance probability of the constant term t in the table is 0.000<0.05, which indicates there is significant difference between constant term and overall satisfaction and the constant term shall be in the equation.

Basic property and video content 0.000, indicating there is significant difference between coefficient of basic property and overall satisfaction, and shall emerge in the equation.

Responsiveness and ease of use 0.000, indicating there is significant difference between coefficient of basic property and overall satisfaction, and shall emerge in the equation.

Economy 0.000, indicating there is significant difference between coefficient of basic property and overall satisfaction, and shall emerge in the equation.

Interactivity 0.000, indicating there is significant difference between coefficient of basic property and overall satisfaction, and shall emerge in the equation.

It can be found through above regression analysis result that there is positive correlation among basic property, video content, responsiveness, ease of use, economy, interactivity and overall satisfaction, featuring significance. Non-standard regression coefficients of three independent variables: basic property, video content 0.786, responsiveness and ease of use 0.235, economy 0.255, interactivity 0.377 and constant 1.594. The regression equation of user satisfaction of mobile phone video application can be built.

Y=1.594+0.786x1+0.235x2+0.255x3+0.77x4+1.594E-18

User satisfaction of mobile phone video application=1.594+0.786*basic property and video content+0.235*responsiveness and ease of use+0.255*economy+0.377*interactivity+1.594E-18

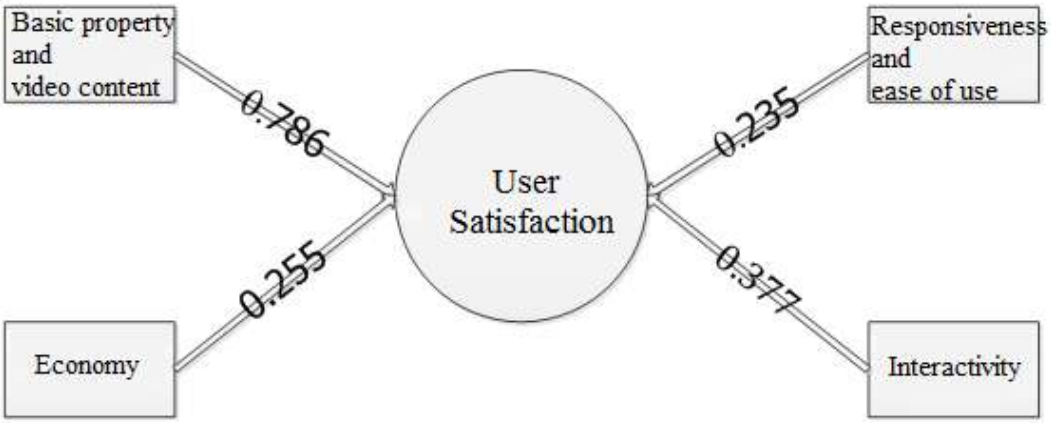
4.6 Hypothesis verification

It is found through data analysis that original seven hypotheses in this paper are not proper for studying user satisfaction influence factor of mobile phone video application. Therefore, they are rejected. Besides, four factors influencing mobile phone video application satisfaction are concluded. In addition, the following conclusions are reached.

Research hypothesis	**Result**
Basic property and video content of mobile phone video application has positive influence on user satisfaction	Established
Responsiveness and ease of use of mobile phone video application has positive influence on user satisfaction	Established
Economy of mobile phone video application has positive influence on user satisfaction	Established
Interactivity of mobile phone video application has positive influence on user satisfaction	Established

1.15 Research hypothesis verification

Thus, the model of influence factors of user satisfaction of mobile phone video application can be concluded, as shown in the Fig. 4.16 namely mobile phone video application user satisfaction model.



1.16 Research hypothesis verification

CHAPTER V

CONCLUSIONS & EXPECTATIONS

5.1 Research conclusions

Firstly, through overall introduction of mobile phone video application, the research objects of this paper are defined. Secondly, based on related literatures, satisfaction theory and applied research of mobile phone videos at home and abroad, the influence factors influencing the user satisfaction of mobile phone video application are analyzed. Besides the research hypothesis is proposed and mobile phone video application satisfaction model is built. The scale for measuring mobile phone reading application satisfaction is designed in this paper. In addition, the questionnaire is also implemented. Through data analysis and under the circumstance that the original hypothesis is rejected, the new conclusion is reached. Now, the research conclusion is briefly described as below:

The users of mobile phone video application mainly familiar with internet and mobile phone application are mainly aged 19-35. They are mainly student above college degree and office workers. The mobile phone video applications mainly include IQIYI, Youku Video, Tudou Video and YouTube. The using frequency is 1-2 hours every day. When using mobile phone video application, the users mainly watch TV, movie, variety show and live live streaming. The users of mobile phone video application mainly use IOS and Android systems. The mobile phone operator is mainly China Mobile.

The main factors influencing the user satisfaction of mobile phone video application mainly include basic property and video content, interactivity, economy, responsiveness and ease of use. Besides, these four have positive influence on user satisfaction of mobile phone video application, in which the basic property and video content has the greatest influence. The influence coefficient is 0.786, 0.377, 0.255 and 0.235 respectively.

5.2 Management suggestions

By combining quantitative study, it's concluded that basic property, video content, interactivity, economy, responsiveness and ease of use are factors influencing user satisfaction of mobile phone video application, based on which, following suggestions for mobile phone video application are proposed.

Enrich video content and improve video content & quality

Video content, the key to the satisfaction of mobile phone application, is also the core competiveness of mobile phone video application. Therefore, to throw more energy into the content construction, it is necessary to enrich video content, improve the old video library, absorb more new works and expedite update speed of video content. In addition, it is necessary to strengthen cooperation and strive for more unique contents. In this way, lots of high-quality contents are provided for the users. In addition, the competitiveness of mobile phone video application is also enhanced.

Optimize mobile phone video application function and improve basic property and ease of use

Through study, it is found that the user will care about the basic property and ease of use of the product when using mobile phone video application just like products of the same category. At this time, precision pushing and update prompt is also important factor for improving user satisfaction. At big data era, the merchants of mobile phone video application can analyze and grasp the user's watching habits, hobbies and focuses of the users. Then, the videos are pushed to the users through functions including pushing and remind so that the users have more choices and improve user satisfaction.

Increase more preferential conditions and improve software economy

One of incomes from mobile phone video software is the income from the membership charge. The user can remove the advertisement by purchasing the membership and participate in preferential activities such as yearly package. These activities cannot completely satisfy the user's demands. It is advised to adopt measures with high cost performance ratio similar to for membership only and membership month to improve economy.

Increase communication channel and improve user's interactivity

At new media era, the users are not satisfied with one-to-one or one-to-many communication and propagation modes and the communication mode is evolved into more diversified and three-dimensional multi-to-multi mode. Interaction in mobile phone video application appears exceptionally important. After the arrival of "bullet curtain", the user's former comment and interaction modes are changed to a certain extent. In consequence, the users can enjoy the unique experience brought by the bullet curtain chatting while watching movie. Meanwhile, it is helpful to improve the user satisfaction.

5.3 Research contribution and innovation

Based on satisfaction theory, by combining the actual features of mobile phone video application, through empirical methods and discussion of questionnaire and data analysis, the influence factors of satisfaction of mobile phone video application are concluded. Ultimately, it is proposed that video content, interactivity, economy, responsiveness and ease of use are the key factors influencing the user satisfaction of video application.

The contribution and innovation points of the research in this paper mainly include several aspects:

The pioneering empirical study on user satisfaction of mobile phone video application is carried out. Satisfaction influence model is generally applied into the study on fields such as traditional product and service. There are rare studies on satisfaction of mobile phone video application. The application of study on satisfaction factors into the internet product is also a bold attempt, which has reference significance for study on other internet products and satisfaction.

It's concluded that video content, individualization and interactivity are important influence factors of user satisfaction of mobile phone video application through empirical study. In addition, related suggestions for the management are proposed, which is greatly helpful for the improvement of merchant product of mobile phone video application and user experience improvement, provide basis and certain reference value for the prosperity of the industry in the near future.

5.4 Limitation of the research

It is necessary to follow the scientific research standard for the implementation process of research design. However, due to the limited time, expenditure and energy, there is certain limitation in this research unavoidably, which mainly include following several points:

Few sample quantities and deficient data basis

Sample is the basis for data survey. The most accurate way for the mobile phone video application is general survey. However, in view of high cost for general survey, it is necessary to hand out and collect questions to and from the surrounding classmates and friends within the allowable range as far as possibly. Thus, the sample quantity is small, which might have certain influence on the research result of this paper.

Limitation of scale design

The measurement is carried out with scale in this paper. However, there are very few surveys into the satisfaction with internet products at home and abroad and there is lack of target-based reference basis, the scale design cannot cover all factors of satisfaction of mobile phone video application influencing the consumers so that there is limitation in scale.

Limitation of literature research

The research object in this paper is mobile phone application. It has not emerged for a long time. There are related rare academic literatures. Therefore, there is lack of sufficient related research bases and certain theoretical support. Besides, there are even few articles dealing with empirical study on satisfaction of internet industry, thus there is limitation in this paper to a certain extent.

Limitation of influence factors

Basic property ease of use, responsiveness, video content, economy, individualization and interactivity are seven influence factors of satisfaction of mobile

phone video application but are not certainly the total ones. It's expected that other scholars could carry out in-depth study in the future so that the satisfaction of mobile phone video application could be studied in a more comprehensive perspective.

5.5 Research Expectation

Mobile phone application, the inevitable trend that the internet platform turns to the mobile platform, not only brings about convenience to the users but also expands the market of video merchants. Along with the great dependence of global netizens on mobile phone and internet, it is necessary to carry out in-depth and width research on related commercial services and users of mobile phone. The study on this aspect can facilitate better development of related industries, improve economic efficiency, save cost and make contributions to the national economic development.

It's advised to improve the study on user satisfaction of mobile phone video applications:

Consult more related literature. There have been more and more studies on related theories of mobile phone application and satisfaction. The study can be carried out with target through reference to related literature.

Find out more influence factors. Seven factors influencing the user satisfaction of mobile phone application are proposed in this paper. Ultimately, video content, individualization and interaction are main influence factors, where there exists certain limitation. It's expected that more influences are discovered to improve the system.

Improve scale design. As for survey into user satisfaction with mobile phone video application at the present stage, it is necessary to improve the scale design in this paper. It is advised to propose better scale design for the follow-up study and improve scale design.

Select more samples. As for survey into the user satisfaction of mobile phone application, the research result is influenced by the quantity of samples to a certain extent. It is advised to collect more and comprehensive sample data for the follow-up study and improve the accuracy of data.

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APPENDIX

Questionnaire of

User Satisfaction of Mobile Phone Video Application

I. Your personal information is as below, not involving any through you can be kept in touch. It's only for academic statistical analysis.
All data is confidential. Please tick in the corresponding options.

1	**Your sex:**				
	Male	Female			
2	**Your age**				
	Below 18 years old	19~25	26~35	36~50	Above 60 years old
3	**Your education degree:**				
	Below senior high school	College	Bachelor	Master	Doctor
4	**Your current career**				
	Governmental staff	Company/enterprise clerk	ndividual operator	Student	Others
5	**Your current monthly income**				
	Below 2000	2000-5000	5001-8000	8001-15000	Above15000
6	**The common mobile phone video APP**				
	YouTube	Tencent Video	Youku Video	Sohu Video	IQIYI
	Baidu Video	LeTV	PPTV		
7	**The frequency that you use the mobile phone video application**				
	Use every day	Once every 1-2 days	Once every 3-5 days	Fewer	
8	**The probable time you use the mobile phone video application**				
	Within 1 hour	1-2 hours	3-5 hours	More than 5 hours	
9	**The mobile phone video application is mainly used for**				
	TV drama	Movie	Network short film	Live video	Others
10	**The operator of mobile phone you are using**				
	China Mobile	China Unicom	China Telecom	DTAC	Others
11	**Operating system of your mobile phone**				
	IOS	Android	Windows phone	Others	

II. According to the actual feeling of your mobile phone video applications, make judgment based on the following descriptions to choose proper answers.

1. Please input question title here [matrix single choice] [required question]

	Unsatisfied very much	Unsatisfied	Ordinary	Satisfied	Very satisfied
1. Satisfaction with memory space of mobile phone video application	○	○	○	○	○
2. satisfaction with Advertisement amount or frequency when watching mobile phone video application	○	○	○	○	○
3. Satisfaction with the stability of mobile phone video application	○	○	○	○	○
4. Satisfaction with interface design of mobile phone video application	○	○	○	○	○
5. Satisfaction with the search function of mobile phone video application	○	○	○	○	○
6. Satisfaction with the registration and log-in function of mobile phone video application	○	○	○	○	○
7. Satisfaction with the column and classification	○	○	○	○	○
8. Satisfaction with opening speed of mobile phone video application	○	○	○	○	○
9. Satisfaction with video loading speed	○	○	○	○	○
10. Satisfaction with various operation reactions	○	○	○	○	○
11. satisfaction with character and illustration loading speed	○	○	○	○	○
12. Satisfaction with diversity of mobile video application content	○	○	○	○	○
13. Satisfaction with the quantity of video content in mobile phone video application	○	○	○	○	○
14. Satisfaction with the quality of video content in mobile phone video application	○	○	○	○	○
15. Satisfaction with the update speed of mobile phone video application content	○	○	○	○	○
16. Satisfaction with the videos exclusively released in mobile phone video application	○	○	○	○	○
17. Satisfaction with the charging video price of mobile phone video application	○	○	○	○	○

	Unsatisfied very much	Unsatisfied	Ordinary	Satisfied	Very satisfied
18. Satisfaction with the membership charging preference of mobile phone video application	○	○	○	○	○
19. Satisfaction with discounting & sales promotion activities of mobile phone video application	○	○	○	○	○
20. Satisfaction with the completion of tasks including signing or evaluation of mobile phone video application and the obtained preference	○	○	○	○	○
21. Satisfaction with the content pushed to mobile phone video application	○	○	○	○	○
22. Satisfaction with the customized program or classification in mobile phone video application	○	○	○	○	○
23. Satisfaction with the record & using habit function of mobile video application	○	○	○	○	○
24. Satisfaction with the communication with video author, uploader or video anchor	○	○	○	○	○
25. Satisfaction with the communication with other video audiences	○	○	○	○	○
26. Satisfaction with the demands of mobile phone video application	○	○	○	○	○
27. Overall satisfaction with mobile phone video application	○	○	○	○	○

Thanks for filling in the questionnaire at your busy schedule! Thanks!

BIOGRAPHY