



The Impact of Uses and Gratifications on Usage Intention in MOBA Games: Evidence from League of Legends

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Abstract. In recent years, the issue of user retention in MOBA (Multiplayer Online Battle Arena) games has become increasingly severe. However, there is still limited research on how psychological mechanisms affect users' willingness to continue using. Therefore, this article takes "League of Legends" as the research object, based on uses and gratifications, introducing the variable of perceived enjoyment to construct a theoretical model, exploring the influencing factors between achievement satisfaction, competitive satisfaction, social satisfaction, and immersive satisfaction and usage intention. The study obtained 221 valid samples through a questionnaire survey and analyzed the correlation, regression, and mediation effects using SPSS. The results indicate that achievement, satisfaction, social satisfaction, and competitive satisfaction significantly affect usage intention and play a fully mediating role between immersive satisfaction and usage intention. Research suggests that gaming companies should strengthen achievement feedback mechanisms, optimize the design of social and gaming competition systems, emphasize the balance optimization of random gameplay, and achieve the goal of improving user retention by enhancing user pleasure.

Keywords: Uses and Gratifications, MOBA, Perceived Enjoyment

1 Introduction

With the advent of the Internet era, China's e-sports industry has developed rapidly, and PC and mobile terminals have become major game platforms. Among numerous esports games, the MOBA game genre features team competition as its core. Represented by League of Legends, it has long been at the top of the game genre, but despite the expanding influence of events, the player activity of the game has shown a downward trend. Therefore, exploring the factors that affect the willingness of MOBA game users to use has become an important issue in the e-sports industry.

In recent years, Chinese scholars have mainly conducted empirical research on the usage intention of users in different fields based on the technology acceptance model and its extended Uses and Gratifications theory. For example, Wang Yuanwei's research on competitive games shows that factors such as perceived ease of use and perceived usefulness have a significant impact on user attitudes and usage intentions [1]. Yao Xing's research on MMORPG game users found a significant positive

relationship between perceived ease of use, perceived usefulness, perceived entertainment, and immersive experience [2].

In summary, the academic community has made many contributions to the continued use intention and influencing factors of the gaming industry, but there is little empirical research on a specific MOBA game. Therefore, this article hopes to use "League of Legends" as an example to build a model based on the theory of uses and gratifications, and explore the influencing factors of MOBA game users' use intention it. The research results not only contribute to improving user retention in the field of esports, but also expand the application of uses and gratifications theory in the gaming industry from a theoretical perspective.

2 Theoretical Basis and Research Hypotheses

2.1 Uses and Gratifications

The concept of Uses and Gratifications is derived from the Uses and Gratifications theory, which holds that individuals experience psychological satisfaction and pleasure after using media. It was first proposed by Katz, who believed that individuals have an active consciousness in the process of media use, and will combine their own needs to choose media and obtain satisfaction from it [3]. Xiong Ying pointed out that individuals no longer passively accept media content, but actively use media and meet their various needs. Their motivation plays an important role in their actions and media choices [4].

In the context of electronic games, Bartle and Yee summarize player motivation into dimensions such as achievement, competition, socialization, and immersion. Achievement and competition represent the player's self actualization needs, while socialization and collaboration reflect the player's social needs. Immersion and entertainment correspond to the player's emotional satisfaction [5,6].

Li Yuxin and others believe that competitive motivation can help users understand the gap between their own position and that of the other party. This gap can stimulate users to pursue higher levels and more investment, while also increasing their recognition of their own technology [7]. When Zhang Juxiang and others conducted a study on the impact of gamified element apps, they found that achievement, socialization, immersion, and aesthetic motivations have a significant impact on the willingness of college students to use them [8].

Wang Jing et al. mentioned in their study on the viewing intention of e-sports competitions that the social behavior generated by the audience during the viewing process can meet their social needs, thereby affecting their viewing intention. Social satisfaction has an important impact on individual behavioral intention in the context of e-sports [9].

Hamari found through comprehensive analysis of different players that users' sense of achievement has a significant positive impact on their use intention [10]. Therefore, this article selects four dimensions as core variables: competitive satisfaction, achievement satisfaction, social satisfaction, and immersion satisfaction.

2.2 Use Intention

Usage intention refers to an individual's tendency to plan or intend to use a certain product or service. It reflects an individual's attitude towards the product or service and the effort they are willing to put in for it. This willingness will also be subject to various controls, such as product prices, service experiences, etc.

The use intention has different expressions in different fields. In the field of electronic games, Zhang Wenmin believes that the development and operation of MOBA games expect users to continue playing in the game, and the game content provided to players can maintain their attractiveness and attract new users [11].

2.3 Perceived Entertainment Value

Perceived entertainment is the pleasurable experience that individuals experience while playing games. This concept only emphasizes one's subjective psychological feelings. Players often feel happy due to factors such as game design and gameplay, and develop a positive attitude towards the game. Fu,&Pirolli et al. believe that when users browse the internet and experience positive emotions, this feeling will increase their willingness to continue using the internet [12].

Based on this, this article constructs a theoretical model (as shown in Fig. 1) and proposes the following assumptions.

H1: The Uses and Gratifications have a positive impact on the willingness of MOBA game players to use.

H1a: Competition satisfaction has a positive impact on the willingness of MOBA game players to use it.

H1b: Achievement satisfaction has a positive impact on the willingness of MOBA game players to use it.

H1c: Social satisfaction has a positive impact on the willingness of MOBA game players to use it.

H1d: Immersive satisfaction has a positive impact on the willingness of MOBA game players to use it.

H2: perceived enjoyment mediates the relationship between usage, satisfaction, and use intention.

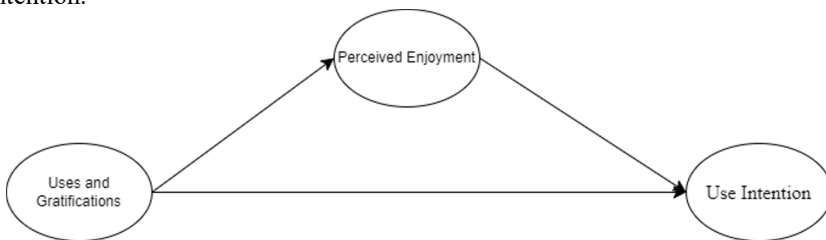


Fig. 1. Theoretical construction (Picture credit: Original).

3 Research Design

3.1 Questionnaire Design

To verify the above hypothesis, this study used a questionnaire survey method to analyze the influencing factors of MOBA game users' use intention. The independent variables are uses and gratifications, the mediating variable is perceived enjoyment, and the dependent variable is usage intention. The independent variables are divided into four dimensions: competitive satisfaction, achievement satisfaction, social satisfaction, and immersive satisfaction. Based on the above variables, this study used the Likert 7-point scale for questionnaire design, designed the questionnaire on Wenjuanxing, and used snowball sampling for data collection. The questionnaire design of this study includes variable questions and basic information questions for the surveyor. The measurement items for each variable mainly refer to relevant mature scales at home and abroad, and are adapted based on the characteristics of League of Legends games.

3.2 Questionnaire Distribution and Data Collection

The questionnaire is mainly distributed to League of Legends players, using online questionnaire collection as the main method. The questionnaire was distributed through Wenjuanxing from January 1 to 1-10, 2026. 221 questionnaires were actually collected, excluding 10 players who answered 'no' (without League of Legends experience) and 9 invalid questionnaires with shorter answer times. Finally, 221 valid questionnaires were collected, and then SPSS was used to conduct demographic analysis on the collected questionnaires.

Finally, 221 valid questionnaires were collected, and then SPSS was used to conduct demographic analysis on the collected questionnaires, 20.4% of players are female, with a relatively higher proportion of players having monthly dominance between 3001-4500, accounting for 24.4%. The overall age group of players is mostly between 18-25 years old. In terms of professions, college students, consultants, and finance have the highest proportion, accounting for a total of 31%.

According to the reliability and validity analysis, the Cronbach's Alpha coefficients of all variables are greater than 0.85, indicating high internal consistency and good reliability level among the tables, which is suitable for subsequent analysis.

4 Data Analysis

4.1 Correlation Analysis

The correlation analysis results indicate that there is a significant correlation between uses and gratifications, as well as usage intention. Immersive satisfaction, achievement satisfaction, competitive satisfaction, social satisfaction, and perceived enjoyment all have a significant impact on usage intention. The correlation between various satisfaction variables is also high ($r=0.870\sim0.887$, $p<0.01$), indicating that players' different experiences in the game are influenced by multiple dimensions. In summary,

when players obtain different types of satisfaction, they will enhance their use intention the game. Therefore, it is assumed that H1a-H1d holds true. As shown in Table 1.

Table 1. relevant analysis and statistics table.

Variable	Use intention	Immersive satisfaction	Achievement satisfaction	Competition satisfaction	Perceived enjoyment	Social satisfaction
US	1					
IS	.861**	1				
AS	.864**	.875**	1			
CS	.865**	.877**	.875**	1		
PE	.873**	.887**	.874**	.875**	1	
SS	.865**	.886**	.876**	.870**	.871**	1

4.2 Mediating Effect Analysis

To examine the role of perceived enjoyment in the relationship between various dimensions of uses and gratifications and use intention, this study introduces the mediating variable of perceived enjoyment into the model. Use the process function in the SPSS program to conduct a mediation effect test to analyze the mediating effect of m between x and y. The results indicate that social interaction ($\beta = 0.873$, $p < .001$), immersion ($\beta = 0.833$, $p < .001$), competition ($\beta = 0.819$, $p < .001$), and achievement ($\beta = 0.866$, $p < .001$) all have a significant positive impact on perceived enjoyment . It indicates that when players obtain different types of satisfaction, their sense of pleasure will be enhanced simultaneously.

After incorporating the mediating variable, the impact of flow satisfaction on usage intention is not significant ($\beta = 0.382$, $p > 0.05$), but it is significant through the indirect effect of perceived enjoyment ($\beta = 0.432$, 95% CI [0.319, 0.551]). It indicates that perceived enjoyment fully mediates the relationship between immersion satisfaction and use intention. Simultaneously, achievement, competition, and social satisfaction not only have a direct positive impact on use intention ($\beta = 0.382\sim 0.439$, $p < .001$), but also indirectly influence use intention through perceived enjoyment. It indicates that perceived enjoyment plays a partial mediating role between these dimensions and use intention. Therefore, hypotheses H1a-H1d and H2 are established.

5 Research Suggestion

5.1 Emphasize Fun Experiences and Introduce Random Events

The research results indicate that perceived enjoyment has a more significant impact than other variables. Therefore, the game content and gameplay design team of League of Legends should focus on "enhancing the fun content of the game" as the core creative

point.. For example, in existing game content, the model of "Hex Battle" with random reinforcement attributes as its core gameplay has attracted a large number of players' attention since its launch. Players are more likely to experience pleasant emotions while expecting different reinforcement effects, which in turn generates a willingness to continue using them. Therefore, in future game design, the application of random effect mechanisms in different gameplay can be further explored on the existing basis, introducing map random events or attribute variations to continuously increase players' expectations and freshness.

5.2 Emphasize Competitive Attributes and Reduce Punishment Mechanisms

In League of Legends ranking mode, competitive attributes are often influenced by game results, leading to players losing their motivation to play. The existing game mechanism aims for team victory as the ultimate goal, with the winner receiving point rewards and enhancing their sense of superiority. Losers will be punished, which amplifies their sense of frustration. In the long run, overly strong punishment mechanisms can lead players to resort to "lying flat" or premature surrender, greatly weakening their use intention them. Therefore, this study suggests that the player with the highest score on the losing side should have immunity from punishment and exemption from point penalties, ensuring that players can still maintain their competitive satisfaction through the MVP of the losing side in adversity.

5.3 Random Attribute Optimization, Dynamic Guarantee and Upper Limit Mechanism

This study shows that players' perceived enjoyment in MOBA games is highly correlated with their use intention them. Although the random gameplay of the existing "Hex Brawl" has been well received for its fun, it also has significant differences in game intensity due to its random attributes, which affects the fun and sense of achievement of the game. Especially when players obtain weaker attributes while the enemy obtains stronger attributes, it can lead to greater difficulty in killing the enemy and a stronger sense of defeat. However, overly strong random attributes can make players excessively pursue a single attribute advantage, weakening the competitiveness of the game. Therefore, to ensure the fun of randomness and avoid disrupting balance, it is recommended to incorporate a balance mechanism into the design. Firstly, attributes should be managed to avoid designing overly powerful attributes. Emphasize the strategic mechanisms of the game, rather than simply enhancing its attributes. Secondly, design dynamic bottom line and upper limit mechanisms to increase the probability of favorable attributes for lagging players, and impose upper limit constraints on players who are already in the top attribute, reducing the probability of obtaining favorable attributes. In summary, based on dynamically adjusting attribute strength and occurrence probability, the balance gameplay can be continuously optimized to maintain freshness and fun through balance and randomness, ultimately enhancing players' use intention it.

6 Conclusion

This study explores the impact of positive psychological factors such as the Uses and Gratifications theory and perceived fun on usage intention, while excluding potential negative factors such as perceived risk and perceived cost. Further research is needed to determine whether these factors affect players' use intention, so future studies will introduce such variables to broaden the model and research hypotheses. Secondly, the scale distribution in this study is mostly conducted online. In order to further improve the standardization and comprehensiveness of data collection, it is expected that online and offline questionnaire distribution will be adopted in the future, and players will be required to fill out the questionnaire in a more standardized manner.

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