

A Study on the Factors Affecting the Electronic Word of Mouth in Mobile Social Network Games

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Abstract. Along with the fast development of wireless networks & smartphone-based mobile games, an increasing number of people are enjoying games on their mobile devices. This study analyzed unique characteristics of mobile social network games and their relationship to online word-of-mouth activities based on previous studies on various types of games. The study revealed that social interaction and ubiquity increased user satisfaction, and that social interaction, ubiquity, asynchronism, and satisfaction all influenced the immersion factor positively. Users were satisfied with being able to exchange opinions and interests with others, but the fact that games can be enjoyed anytime without having to be simultaneously online helped only with immersion and dissatisfaction. Lastly, game users were indeed engaging in online word-of-mouth activities. The research objective is to contribute the findings above to ongoing development of future mobile social network games to help both developers and end-users.

Keywords: Electronic World of Mouth, Game, Mobile, Social Network

1 Introduction

The driving force that enabled Facebook to develop rapidly under worldwide attention was the open-source platform that attracted developers and brought more opportunities to the application market. Recently the Korean game market also has attracted much interest, in the order of 'online games'(47.5%), 'mobile games'(42.3%), and 'portable console games'(4.1%). Interest in 'online games' decreased substantially from 65.9% in 2011 and that of 'mobile games' showed an increase compared to 23.0% in 2011. According to the findings by Gartner, mobile games are expected to have a high growth rate of 18.2% on yearly average and reach the size of 9.4 billion US Dollars by 2016.

Despite the rapid growth, only partial studies have been completed on user objectives of mobile social network games, micro-transaction system, continuous usage, and immersion. This research aims to analyze the effects of mobile social network games' characteristics on online word-of-mouth activities. The research

objective is to provide information that can help with value enhancement for users by verifying the effects of unique characteristics of mobile social network games to the satisfaction and immersion of users.

Additionally it aims to provide theoretical data for marketing strategies in mobile social network games by analyzing the effects of user satisfaction and immersion on online word-of-mouth.

Based on former studies and success cases, an empirical analysis was done on success factors and effects of mobile social network games' characteristics on online word-of-mouth. It aims to provide a business model by drawing variables, done through developing and verifying an empirical model, and by analyzing their effects.

2 Literature Review

Mobile social network games are game services that are linked to social networking service platforms which allow mobility and interactions with connected friends. They enable users to leave footprints through interactivity and to know real-time information without concurrent connection. As they are simple control games with one click they are easy to learn. They also have advantages in that low specification games can be streamed with simple plug-in installations, can be integrated with different platforms, and can be played even for a short period of time.

With the comparison and analysis of the data above, unique characteristics of mobile social network games were deduced and set in a model to find their effects on online word-of-mouth activities.

Online word-of-mouth describes the ability for people who need specific information to search and find that through exponentially growing accumulation of information recorded on the internet. The forms and methods of online word-of-mouth have quickly developed through internet chatting, messengers, feedback forums, and customer reviews. Online word-of-mouth impacts a much broader audience than offline word-of-mouth and also delivers information quickly, although it is difficult to have instant feedback through it.

3 Research Model and Hypothesis Development

This research showed that asynchronism and ubiquity were unique characteristics of mobile social network games, as previous social network games were enhanced with the more comfortable and free environment through mobile devices. Asynchronism allows users to not have to connect to the game while the game is being played and ubiquity allows users to experience real time information and communication without dependency on time and location. Thus the social interaction becomes more active and the social presence that the individual feels when using this media becomes more emphasized. Therefore these characteristics are set as the independent variables.

Immersion and satisfaction were set as intervening variables, and online word-of-mouth as dependent variables in design in [Figure 1].

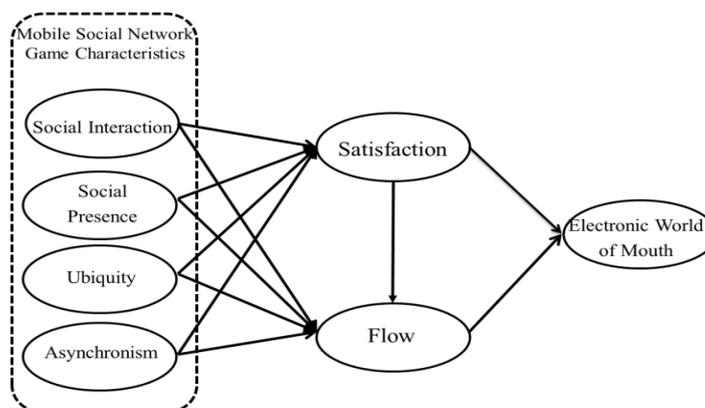


Fig. 1. Research Model

Social interaction is a phenomenon in online and offline life where one communicates with people around and it performs a role beyond just the enjoyment of the game[1]. Interaction can also be described as an antecedent that explains the concept of immersion. It is also shown to affect fulfillment, which is a constitutional concept that can replace satisfaction [2]. There were numerous preceding researches that emphasized social interaction in mobile social network games, social games, and online games.

- H1: The Social Interaction has a positive (+) effect to the Satisfaction.
- H2: The Social Interaction has a positive (+) effect to the Flow.

Social presence is defined as something that an individual perceives during the process of interaction among intellectual beings or through media. It is suggested that the level of social presence is heightened when more information about the other party of the communication is delivered. It is also believed to have a large influence on immersion and satisfaction. It can be said that individual perception is an important characteristic of mobile social network games [3].

- H3: The Social Presence has a positive (+) effect to the Satisfaction.
- H4: The Social Presence has a positive (+) effect to the Flow.

Ubiquity is explained as a characteristic that allows real-time acquisition of information and communication anytime and anywhere without dependencies on time and location[4]. The following hypothesis was constructed based on previous studies and the belief that ubiquitous factors that users experience while playing mobile social network games have positive effects on immersion and satisfaction.

- H5: The Ubiquity has a positive (+) effect to the Satisfaction.
- H6: The Ubiquity has a positive (+) effect to the Flow.

Asynchronism supports gameplay of multiple users without requiring them to be continuously playing, thereby allowing users to engage in other activities. It can be analyzed whether it is impactful to the conscious effort to be satisfied and immersed. [5].

H7: The Asynchronism has a positive (+) effect to the Satisfaction.

H8: The Asynchronism has a positive (+) effect to the Flow.

Satisfaction is a comprehensive psychological state enabled by matching expectations and previous consumer experience. It is a result produced by meeting the demand and expectations of customers[6].

Immersion is a state when an individual is concentrated on something without any interruption. It is also a measurement to define how deeply a group or an individual is involved in a relationship as well as how long they intend to maintain it[7]. The following hypothesis is set to define how satisfaction and immersion affect online word-of-mouth.

H9: The Satisfaction has a positive (+) effect to the Electronic World of Mouth.

H10: The Satisfaction has a positive (+) effect to the Flow.

H11: The Flow has a positive (+) effect to the Electronic World of Mouth.

4 Data Analysis and Results

A survey was done for empirical analysis and to enhance the reliability of the study results, the respondents were narrowed down to those who have played mobile social network games and live in Seoul. Among the 253 survey results, 17 were eliminated for incomplete responses and the remaining 236 surveys were used. Among them, 143 were male(60.6%), 93 were female(39.4%) and 192 were in their 20's(72.9%). 113 were office workers (47.9%) and 150 had bachelor's degrees (63.6%).

To prove the appropriateness of the designed research model, reliability and validity analysis were conducted. To verify internal consistency, Cronbach's Alpha Coefficient was used to conclude that scores exceeding 0.7 showed credibility. Validity describes how closely and accurately a concept or property is measured. A factor analysis was done to prove validity, and the results showed satisfying results on both credibility and validity that enabled the research to be proceeded.

In order to measure the relationship between mobile social network games' characteristics and online word-of-mouth, a path analysis was conducted to verify the hypothesis and the results are summarized as in (Fig. 2).

Firstly, for satisfaction, social interaction (C.R.=2.231/P=0.026) and ubiquity (C.R.=6.221/ P=0.000) had substantial impacts and social presence (C.R.=1.689/ P=0.091), and asynchronism (C.R.=0.102/ P=0.919) did not show any considerable impact. Among them, ubiquity (Beta=0.455) was shown to be have a larger impact than social interaction (Beta=0.168).

Secondly, for immersion, social interaction (C.R.=2.927/ P=0.003), ubiquity (C.R.=2.193/ P=0.028), asynchronism (C.R.=2.295/P=0.022), and satisfaction (C.R.=5.5/ P=0.000) had significant impact but social presence (C.R.=1.734/ P=0.083) did not.

Lastly, for word-of-mouth, both satisfaction (C.R.=2.694/P=0.007) and immersion (C.R.=3.766/ P=0.000) had considerable impact. Between the two, immersion (Beta=0.296) can be said to have a larger impact than satisfaction (Beta=0.218).

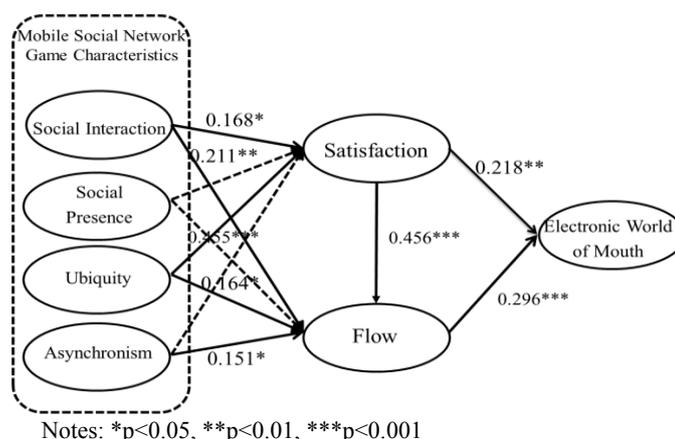


Fig. 2. Research Model

5 Conclusions

Through the study, social interaction and ubiquity were found to have positive effects on satisfaction. Social interaction, ubiquity, asynchronism, and satisfaction were shown to have positive effects on immersion. Satisfaction was shown to have a positive effect on immersion and online word-of-mouth. Lastly, immersion was shown to have a positive effect on online word-of-mouth.

The study showed that mobile social network game users being able to make friends, exchange ideas with people who have similar interests, and share information led to satisfaction and impacted immersion. It also implies that mobile social network games should not be hindered by time or location and allow instantaneous acquisition or use of content and necessary information such as status or rankings. That mobile social network games can be easily enjoyed without needing simultaneous connections allows for immersion but doesn't affect satisfaction. This also showed that it led to online word-of-mouth activities by the users.

Through this research an empirical analysis was conducted on how mobile social network game users fundamentally perceive, get immersed or satisfied, and further engage in online word-of-mouth activities. As a result, unique characteristics were

deducted targeting mobile social network game users and previous studies on online word-of-mouth were complemented academically. Commercially it can be used as an opportunity to lessen developer risk and also an opportunity to create better services for the users.

However, as samples of this research did not cover various groups of age targets, there are limitations on how the findings can be generalized. There are additional limitations as there can be differences in online word-of-mouth engagements based on genres of games. It may be meaningful to analyze various controlled effects based on age, occupation, specialization field, or game genre as future research topics. It may also be meaningful to study the effects and influence online word-of-mouth can bring.

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