User Analysis and Questionnaire Survey

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Abstract. The authors use the multivariate statistics. The authors study to clarify the type of game user. Order to clarify the user type. we conducted a survey about the game style to college students. Research method is the questionnaire. The authors was analyzed by SPSS and amos with it. As a result of using factor analysis, the user is divided into three types. Then performed a Structural Equation Modeling, it was confirmed the accuracy of the factor analysis model.

Keywords: Marketing, User Analysis, Questionnaire Survey, Japanese culture, SPSS, amos, Factor Analysis, Structural Equation Modeling.

1 Introduction

The authors use the multivariate statistics. The authors study to clarify the type of "Otome game" user. "Game" of this study means use the device for play.(Example: Play Station) Order to clarify the user type, we conducted a survey about the game style to college students.

1.1 About Otome Game

"Otome game" means love simulation game for women in Japanese. The word "Otome" means a young girl.

Fig. 1. Flow of the game

Otome game is a game genre like novel. Each one has own story. The player of the game handles a girl who is the heroine of the story. The player can change heroine's name. Of course, the player can change it into her name. And the heroine meets

hand-some men of various characters in the game. She fall in love with one of them. As a result, the player who handles the heroine can enjoy virtual love with the man in the game. This story of the game branches when the heroine chooses one of the men. The number of the branches in a game is same as the number of the men in the game, so the player can fall in love with each man. This is like a romance novel which can choose heroine's partner.

Then, why Otome games are enjoyed in Japan? Japanese are generally slow in sexual development. And, Japanese tend to conceal own romance experiences. Japanese males are called "plant eating" in slang words. So, female wish for aggressive romance to the game.

1.2   Situation in Today's Japanese Market

Otome game is one of the game genres that is growing significantly in today's Ja-pan. Otome game market is forecasted to become about 15.6 billion yen in 2012. The market in 2011 is 14.6 billion yen. This is 30 percent extra compared with 2010. [1]

The history of Otome game goes back until 1994. But at that time, the game genre was not well known, that state continued for a while. However, a product had an explosive sales in 2002. Hereafter, Otome game has become to be known at once. After that, the products which became a big hit continued in 2006 and 2008. In 2010 Otome game came to be known more because famous product had been animated. More over, in 2011, an animated product did smash hit. To promote CD products related to the animation work, a lot of flags and the posters were located at JR Ikebukuro station. In 2013, promoting posters were posted at 13 JR stations nationwide. At first, Otome game was known by only a part of the game industry. However today, it is known by many people and was grown to very popular genre in Japan. In addition, if a product becomes big hit, a lot of related products are sold, such as CDs, Goods, or events. It has been also performed Popularity Index.[2]
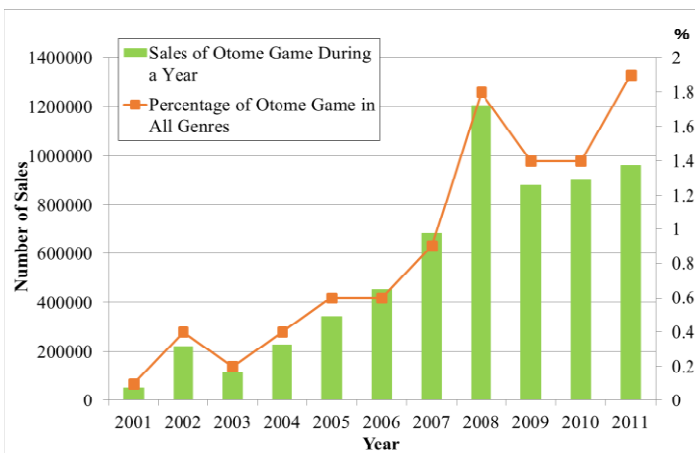

Fig. 2. The Total Sales Number of Otome Game During a Year and The Percentage of Otome Game Sales in Sales of All Game Genres[3]

These graphs show two kinds of numbers about sales of Otome game industry be-tween 2001 and 2011. Green bar graph and left vertical line show the total sales num-ber of Otome game during a year. Orange line graph and right vertical line show the per-centage of Otome game in all genres of game. These graphs also shows Otome game market is growing in Japan. Especially, because the percentage has been in-crease, it is clear that Otome game is known by people who did not play these games gradually.

1.3   Overseas Expansion

Recently, Otome game is also released in foreign countries. In 2012, Voltage Inc. began the service "A Prince's Proposal" for North America. The company already had purveyed the service "Pirates in Love", Otome game for North America. This took 21st place by the App store entertainment category of North America in August 2012. And in Asia, this took 1st place by the App store entertainment category of Singapore in same month. Moreover, another product of Voltage Inc. "My Forged Wedding" took 2nd place in same record. From above, it can be said that the acknowledgment level of Otome game in foreign countries is rising.[4]

1.4   Purpose of Research

As can be seen from above, the market of Otome game has expanded every year. However, today in Japan, Otome game industry do not enough analyze the user. Then, to search for "Needs requested from the otome game now", The authors decided to analyze the otome game user.

So, to search for the needs that are required for Otome game, the author decided to analyze the users.

2   Marketing Research of Otome Game

2.1   Questionnaire Survey

Before taking the questionnaire in a young girl gamers, authors have conducted a questionnaire about "game style" to college students first. In this questionnaire, The authors asked about the dating simulation game in particular. The authors went to 20 people a preliminary investigation before making the questionnaire. Question was improved on the basis of the preliminary investigation.As a result, The authors got the results of 333 people. The following is the content of the questionnaire.

- Sex
- Age
- Currently, Do you play a TV game by game machine?
- What kind of have a TV game machine?
- What kind of have a   mobile phone?
- Have you ever played the game in the mobile phone?

- What playing are you platform?
- Have you used the billing services?
- Have you ever played the download type's game?
- Which element is most important to you?
- Dou you know about Date-simulation game and Otome Game?
- Have you ever played Date-Simulation game?
- How many Date-simulation games have you ever played?
- How did you start Date-simulation game?
- Why do you continue dating simulation game?

2.2   Questionnaire Result

"Which element is most important to you?"

First, The authors questioned fourteen items about importance of the elements of games. The word "game" in this question include all genres besides Date simulation game.
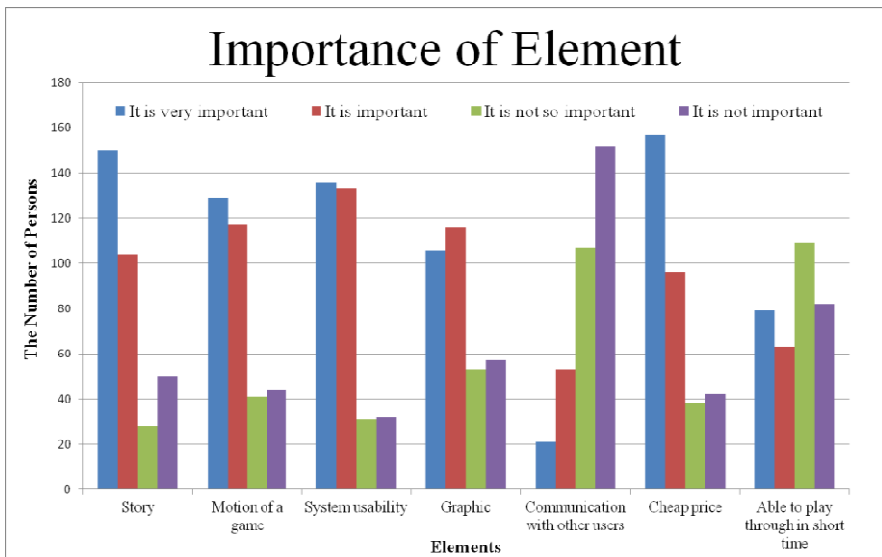

Fig. 3. Importance of Element

This is a graph about the questionnaire. The authors took out seven main items from the questions. These items are "the story", "the motion", "the system usability", "the graphic", "communication with other users", "the price", and "play through time". The most interesting information is that, the university student users think it is not important to communicate with another persons by a game. More than sixty percent of them play social games which has the function to share the world of the game

with other players. But according to the comparison of importance of elements, these users do not think about importance of communication.

"Dou you know about Date-simulation game and Otome Game?"

This question about the awareness of Date simulation game made clear that more than half of men and women know about Date simulation game.
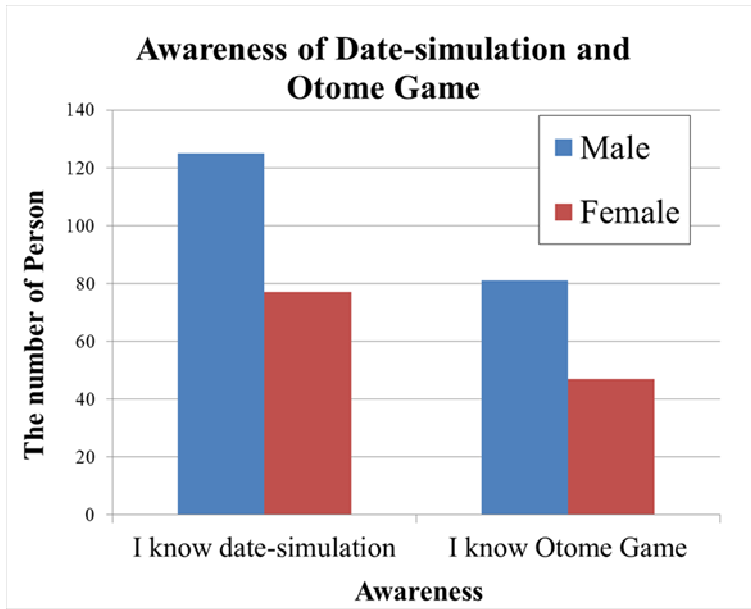

Fig. 4. Awareness of Date-simulation and Otome Game

The word "Date simulation game" mean not only Otome game, but also include Date simulation for men. More than half of the answerers know Date simulation game, but awareness of Otome game is relatively low.

"Have you ever played Date-Simulation game?"

The "Gal game" means Date simulation game for men that mentioned above. And in Japan, the word "Consumer" means the game consoles except mobile phone or smart phone. Play Station Portable and Nintendo DS are examples of Consumers. Many answerers play Gal games with Consumer consoles. But Otome games are played equally with both of the consoles, consumer and mobile phone hold similar number of percentage. Otome game in mobile phone have more users than Gal game in mobile phone. The reason The authors suggest is that the players of Otome game are mainly female, and they tend to hide the fact that they play Otome game, so they chose more private instrument, mobile phone,   than Consumer console. On the other hand, the data of Gal game do not have difference between mobile and consumer. So men do not tend to mind to hide their fact.
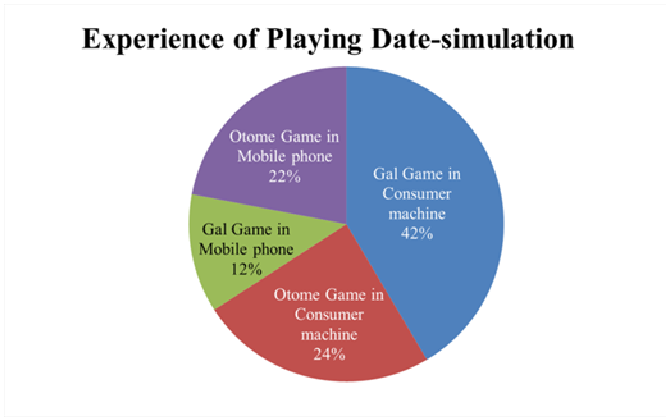
Fig. 5. Experience of Playing Date-Simulation

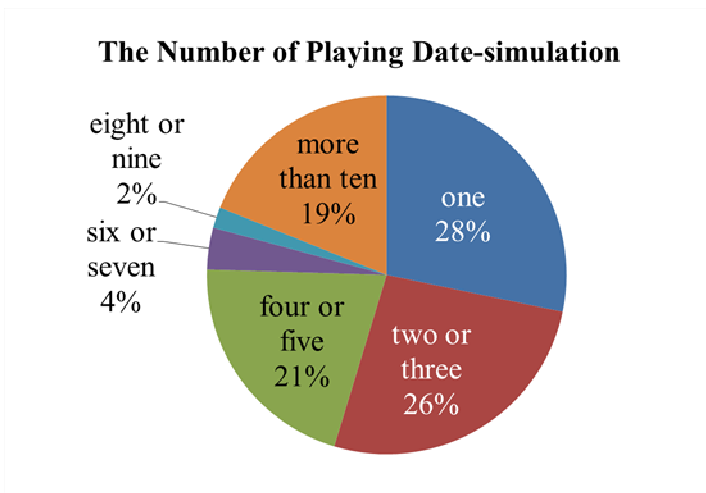"How many Date-simulation games have you ever played?"

Fig. 6. Trigger to play Date-simulation

For this question, most of the answers shows that many users have played several numbers of Date-simulation game. But the users who play a lot of Date-simulation game also exist.

"How did you start Date-simulation game?"

The most numerous answers to this question are that the users friend recommended him or her to the game. The second highest answers are to see the web advertising. Ninety nine percent of Japanese university student use the mobile phone, so they tend to catch their information by the inter net with the phone.
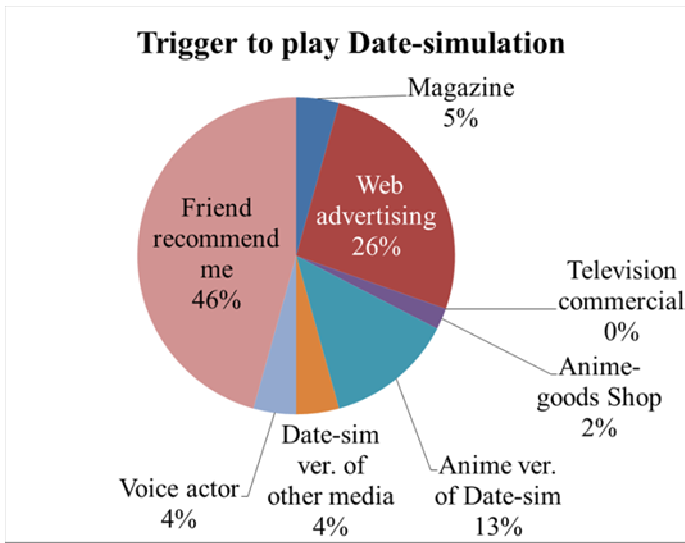
Fig. 7. Trigger to Play Date-simulation

2.3   Data Analysis

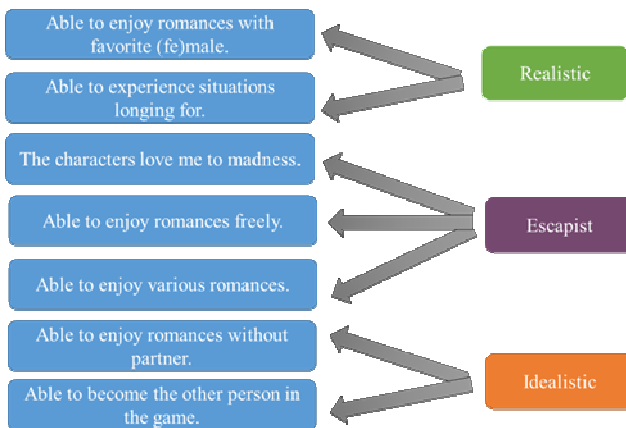"Why do you continue playing Date-simulation game?"

Fig. 8. Result of Factor Analysis

The answers for this question has dispersion. To understand more, The authors analyzed this results with factor analysis. The method in this study are "Principal Factor Method" and "Varimax Rotation." As a result, The authors could extract three factors.

Analyzing this result, it is revealed that these three factors seriously affect the choices of the answers. Considering these factors, The authors found hidden factors that continue the players to play Date-simulation games, and examined these factors. The kinds of these factors are on the figure.

Then, The authors explain these factors of way of thinking. The authors interpreted the three factors as the characters of users: the realistic character, the escapist character, and the idealistic character. First, The authors explain the factor, "realistic" character. The realists have solid life in real world, so they do not depend on the romantic fiction, and they enjoy fictional romance just as it is. On the other hand, the rests tend to depend on the world of game. The escapist's attitude for reality is something negative, so they comfort themselves with becoming another person in the world of game. The idealists have various desire for romance, but those are impossible to materialize, so they enjoy those sentimental romances in the world of game.

Based on the result of Principal Factor Method, most of the persons who play the Date-simulation are "Realist".

2.4   Structural Equation Modeling

The authors likened the results of the factor analysis in SEM.The authors was using the amos in the analysis. Corresponding item from each of the three factors are affected.We assumed the covariance between factors to all.The result, GFI became 0.925.AGFI became 0.809. Covariance of the latent variable is a good. It was a good result fit.
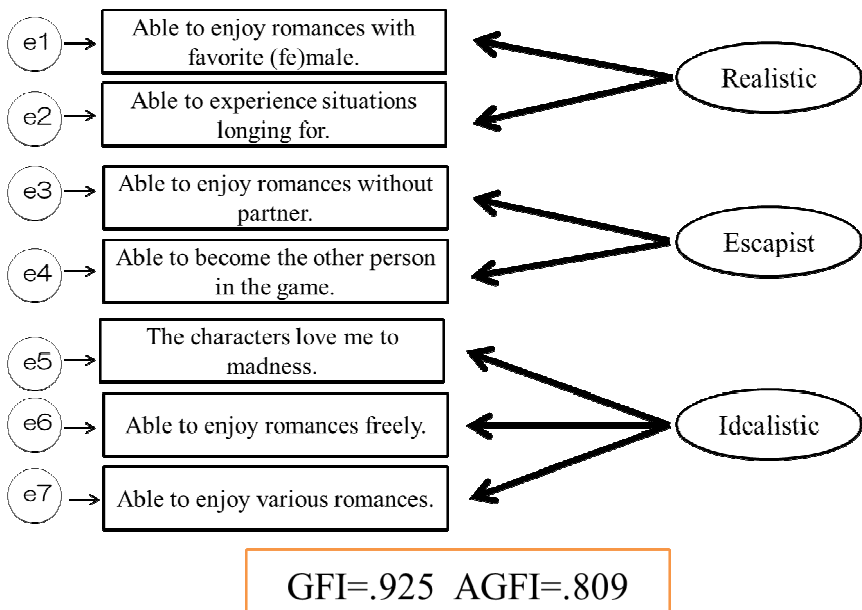

Fig. 9. Structural Equation Modeling

2.5   Future Study Directions

Finally, The authors tell about the future direction of the study. This time, The authors could not collect sufficient answers, so The authors would like to study again with more plenty effective data. Hereafter, The authors would like to investigate more different user types with user study in different angle.

Also, I would like to improve the model for SEM.

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