

Exploring online game users' value and life style

Shwuhuey Wang

Department of Innovative Design and Entrepreneurship Management

Far East University, Taiwan

shwuhuey.wang@gmail.com

Abstract

The advent of online game grasped user's eyesight quickly and become worldwide popular in a short time. For the values and lifestyle of a certain group is quite critical for marketers, they can make effective and valuable strategies by understanding the above factors, therefore, if the vast amount of online game users possess common features remain worthy to be explored. The objective of the study is to explore online game users' value and life style for practitioners to make future strategies. We send out 400 questionnaires to online game users and 327 were returned. Factor analysis was conducted to analyze to find out the features of the participants. The results indicated that online game users can be classified as the following three groups: fashion-pursuing, rational behavior and duty-abiding. Accordingly, marketers should make effective and specific strategies when focusing on these groups so that they can significantly enhance the efficiency of decisions under limited resources.

Key words: Online game, Value, Lifestyle

1. Introduction

The prosperity of Internet brings unpredictable change for modern business society. As people in modern society are always busy, the advent of online games quickly attached popularity by lots of Internet users. The prevalence of Internet makes great help on the development of online games, it allow users to fully enjoy the fun of virtual reality under a free space and unlimited time.

Based on the report of Market Intelligence Center (MIC) in Taiwan, the number of Internet users in Taiwan is about 3,870,000 household in 2005; the number of online game users keeps growing up with that of HiNet users and has reached as high as 1,160,000 in the recent year. It is estimated that more and more people will get involved in the area in the future. Therefore, exploring the psychological dimension (values and life style) of players who engaged in the new form of entertainment to understand if they possess common features would be quite

meaningful.

The objective of the research is to investigate online game users' values and life style. Hopefully, it will be helpful to researchers and practitioners when they are making marketing strategies toward online game users.

2. Literature Review

2.1 Definition and history of online game

The so-called online game (OLG) refers to the game that allows multiple remote users to enter a virtual Internet world to accomplish it simultaneously. As the server allows multiple users to enter the system, the number of online game users may be as many as hundreds or thousands of people at the same time.

The existence of online game goes far before the commercialization of Internet and the advent of browser. Later on, the programme "Multi-User Dungeon" (MUD1) that written by the two England scholars from University of Essex --- Richard Bartle and Roy Trubshaw on DEC-10 is the ancestor of online game.

MUD has the following three characters: first, MUD employs a vast amount of words to do role-playing rather than diagrams or software to create virtual environment, therefore, it can also be recognized as the virtual environment that created based on the word basis; second, MUD allows multiple users to log in simultaneously and share the same information resources; third, the internal environment of MUD can be amplified by users, for example, adding the number of rooms and endowing objects with different behaviors.

As online game users have formed a kind of virtual playing community, prior research (Hagel and Armstrong, 1996) documented that virtual communities can be classified based on the types and membership, for example: communities of transactions, communities of interest, communities of fantasy, and communities of relationship. Klang and Olsson (1999) also divided them into community networks, professional societies, personal societies and the "third place," where users go to meet with new and old friends. Klang and Olsson (1999) identify four types of communities: the forum, the shop, the club, and the bazaar. The bazaar includes all the activities where the members can make transactions by buying and selling virtual goods like the real world. It has more and more prevalent in the recent days.

In short, the developing speed of online game goes far beyond our imagination. It'll be hard for us to imagine how our descendants' lives will be, just like it is also hard for our ancestors cannot realize how our lives are!

2.2 Value

Value refers to the personal constant perspective toward one thing. The formation of value is a dynamic process and needs the accumulation of a long period of time. During the process of formation, people's value will usually be influenced by their family, friends or peers. However, once the constant view is constructed, it can be influential on people's affection and used to be the criterion to tell wrongs from rights. Accordingly, the concept of value covers the parts of cognition, affection and behavior (Kluckhohn, 1951)

Based on the report of Rokeach (1973), value is a hypothetical construct, it can not be observed directly but has to be inferred by the statements of words or languages and different behavior. Basically, value is a kind of belief, which includes the three fore-stated concepts: cognition, affection and behavior. In the real life world, the belief would have impacts on personal expectation, hypothesis and judgments toward something. Additionally, when one has to make a decision based on a complicated situation, the concept of value may impact the direction of his/her decision; in other words, value is the outcome of individual or societal preference; though value is a kind of concept, it reflects through personal behavior, therefore, value influences personal objects or the ways of behavior; the concept of value is sequential, it comes from a hierarchical structure based on things' importance and priority, this is the so-called "value hierarchy"; finally, for the formation of value takes a long time, once it's formed, it's become a stable and constant concept, meanwhile, it also takes much time to change the concept of value.

As stated, the formation of personal value will be influenced by parents, family and peers, it is actually an epitome of the process of socialization, therefore, it will be hard for personal behavior or decision not to be influenced by value. Personal value can be changed only when individual runs into big events or his/her usual behavior model is seriously changed. This leads to the fact that value will have impacts on personal attitude and behavior (Mowen & Minor, 2001).

If service practitioners can try to understand their customers' value, it will be helpful to build up good customer relationship, because value impacts people's perception and value is also the prior term to understand consumer's attitude and motivation. On the other side, value is also the criteria to differentiate rights and wrongs. When one is facing decision-making problem, value becomes the key points to decide how a person take steps to solve the problem. Hence, value does have impacts on personal behavior; marketers may judge customer's behavior through understanding personal value.

2.3 Life style

Life style refers to how a person lives (Hawkins, Best & Coney, 1992). The ways of life style will be influenced by intrinsic and extrinsic factors such as culture, value, demographic variables, social position, reference group, family, personality, motivation, cognition, learning and marketing activities. Meanwhile, life style can be reflected through personal activity, interests and opinion (Kotler, 2000).

The core concept of life style is that it is the important performance of personal value and personality. Even two people live in the same environment, their life style could be different because of the discrepancy of personality, and thus life style is the outcome derived from the long adaptation of personal value and personality. However, from the other perspective, life style can also be regarded as the ways that consumers live and dominate their money and time (Engel, Kollat & Blackwell, 1973).

The importance of life style to the marketers is that researchers may understand consumer's life style and then judge consumer's motivation and personal characters accordingly (Settle & Alreck, 1989). AIO (activity, interest, opinion) scale is the instrument that used by researchers to measure life style most often. Table 1 presents the definition of AIO variables.

Table 1 Definition of AIO variables

Variables	Definition
Activity	Refers to the visible activities, usually they can be judged from the apparent behaviors, however, the real reasons that hind in the back can not be measured directly.
Interest	Refers to the degrees of excitement toward different things, events or topics that may cause people with constant attention.
Opinion	Refers to the oral or written answers provided for the extrinsic environmental stimulation, they can depict people's explanation, expectation and evaluation toward different situations.

Source : Plummer, J. T.(1974). the concept and application of life style segmentation. Journal of Marketing, 38, 33-37.

Researchers used to take demographics as the scale to measure consumer behavior, however, demographics can only make us realize "who " has bought the products, they are not able to tell us why s/he wants to buy the products. Therefore, psychographics has become the tool to evaluate people's life style in the recent years. Marketers can accordingly understand the tendency of consumer's personality and their attitude and perspectives toward different

products and things (Soloman, 2015) .

3. Methodology

3.1 Research framework

The study employed factor analysis to condense the questions into several dimensions to explore whether the questions are strongly correlated so that we can induce them into the factors with common factors, then we can realize which factors are influential to consumer behaviors.

Based on the outcomes of factor analysis, we calculate the participant's factor scores on different factors and conduct K-means cluster analysis to divide consumers into several clusters and observe the features of each cluster. Accordingly, we can understand how consumers present their characters and make marketing decisions.

Table 2 Variance Explained Through Factors Initial Eigenvalues

	Initial Eigenvalues/ Total Variances Explained		
Component Factor	Total	% Of Variance	Cumulative%
1	9.319	18.637	18.637
2	3.841	7.682	26.319
3	2.845	5.689	32.009
4	2.268	4.537	36.545
5	1.939	3.878	40.423
6	1.684	3.368	43.791
7	1.586	3.171	46.963
8	1.368	2.735	49.698
9	1.338	2.677	52.375

Finally, the participants' demographics and the fore-stated factor scores were cross-examined. We conducted one-way variance analysis in this part and the reason for us to do that is to examine if there exists any difference between groups on some variables. If the Between Group Variation is significantly greater than the Within Group variation, then it is possibly that there is a statistically significant difference between the groups.

Accordingly, we can find out which demographics of the participants may cause differences on consumer behavior.

3.2 Material

The participants of the study are experienced online game users. To be representative, we send out 400 questionnaires island widely to online game users, 327 were returned, after eliminating the invalid samples, the return rate turns out to be 81.75%. Most of the samples were collected from those who were playing online games in Internet Coffee shops. It was anticipated that the accuracy of the inference could be highly lifted.

3.3 Operational Measure

Data were collected using a seven-point Likert-type scale, where 1 reported strongly disagree; 2 indicated disagree; 3 meant slightly disagree; 4 showed uncertain; 5 stood for slightly agree; 6 reported agree; 7 indicated strongly agree. The questionnaire consisted of 50 items to evaluate the participants' values and life style. Please refer to appendix for the contents of the questionnaire.

4. Results

4.1 Factor Analysis

The main applications of factor analysis are: 1. To reduce the number of variables and, 2. To detect structure in the relationships between variables, that is to classify variables. In other words, factor analysis is applied as a data reduction or structure detection method.

Principal Factor Analysis

Factor 1: Fashion-pursuing

The items that are highly related to the factor are: 27. I like to pursue novel and fashion things; 28. I am a fashion person in people's eyes; 41. I do care if the objects that I bought can make me distinguished; 42. I like my things to be splendid; 43. I hope what I bought can be envied and praised by others; 44. I do care if the objects that I bought are in fashion. Those who gained high scores in this factor showed stronger fashion-pursuing behavior.

Factor 2: Rational behavior

The items that are highly related to the factor are: 14. I think I can utilize my time and money very well; 35. Usually I can effectively utilize my time; 36. When I make plans, I'm sure I can successfully perform the arranged plan; 45. I behave systematically and rationally; 46. I am used to send objects back to their original positions after using them; 47. I eat regularly and moderately. Those who received high scores in this factor presented significant rational behavior.

Factor 3: Adventure-taking

The items that are highly related to the factor are: 37. I like to try different ways to do things; 38. I am the one who likes to pursue excitement and fresh lives; 39. I am willing to take adventure more than other people; 40 I like new things and are willing to try new products.

Those who obtain high scores in this factor displayed stronger attitude of adventure taking

Factor 4: Extraverted and cheerful

The items that are highly related to the factor are: 30. I am a vivid and cheerful person; 31. It's easy for me to have fun time with those who meet me at the first time; 32. I am influential on my friends. Those who gained high scores in this factor demonstrated stronger extroverted and cheerful attitude.

Factor 5: Careful calculation and strict budgeting

The items that are highly related to the factor are: 8. I like to make comparisons among different stores when I am purchasing; 11. I like to buy goods at the shops with plenty of commodities; 12. It is important for me if the purchasing location is convenient; 20. I buy what I planned to buy only when the shop is on sale. Those who get high scores in this factor showed stronger attitude of careful calculation and strict budgeting.

Factor 6: Duty-abiding

The items that are highly related to the factor are: 9. It is better to abide by duties in our lives; 19. My current daily life has been very good, it is not necessary to change anything. Those who received high scores presented stronger attitude to abide by duties.

Factor 7: Introverted and lonely

The items that are highly related to the factor are: 33. I am an introverted person; 48. I often feel lonely; 50. I am annoyed for my opinions were not adopted. Those who obtained high scores displayed significant introverted and lonely attitude.

Factor 8: Fickle affection

The items that are highly related to the factor are: 5. I like to buy a new product even the old one is not broken; 6. I think the function of new product or service is better; 18. I like new products or services better. Those who get high scores demonstrated stronger attitude of fickle affection.

Factor 9: Diligent in data-collecting

The items that are highly related to the factor are: 1. I often collect information from Internet; 2. I like to ask for suggestions from my relatives or friends before making buying decisions. Those who gained high scores in this factor presented stronger attitude on collecting purchasing information.

The above stated characters demonstrated nine different dimensions of various characters of online game users and it covers the components that depict the online game users buying behavior.

4.2 Cluster analysis

Then we calculated factor scores for each items based on the 9 factors obtained from

factor analysis of the previous stage, and K-means method cluster analysis was conducted according to factor scores. The results showed that the participants can be divided into several groups with different traits and it is helpful to understand the consumer behavior of online game users.

Table 3 Average Factor Scores on Each Cluster

Clusters	Factors	Scores	Clusters	Factors	Scores
Fashion-pursuing group	Fashion-pursuing Group	0.79250	Duty-abiding Group	Fashion-pursuing Group	-0.08025
	Rational Behavior	0.21708		Rational Behavior	-0.30771
	Adventure-taking	0.21506		Adventure-taking	-0.30150
	Extroverted and Cheerful	0.26698		Extroverted and Cheerful	-0.08316
	Careful Calculation and	0.16467		Careful Calculation and	-0.36404
	Duty-abiding	-0.04339		Duty-abiding	0.53743
	Introverted and Lonely	0.22847		Introverted and Lonely	-0.13527
	Fickle Affection	0.50508		Fickle Affection	-0.03720
	Diligent in Data-Collecti	-0.04498		Diligent in Data-Collecti	0.09177
Rational shopping Group	Fashion-pursuing Group	-0.69582			
	Rational Behavior	0.53354			
	Adventure-taking	0.20696			
	Extroverted and Cheerful	-0.15500			
	Careful Calculation and	0.54310			
	Duty-abiding	-0.29163			
	Introverted and Lonely	-0.04193			
	Fickle Affection	-0.46318			
	Diligent in Data-Collecti	-0.08390			

We then classified the participants into three groups and give a name to them based on the traits of factor scores:

1.Fashion-pursuing group: The ones get higher scores in this factor are factor 1(fashion-pursuing group) and factor 8 (fickle affection group). The amount of the group is 96, roughly accounts for 30% of the total participants.

2.Rational-shopping group: The ones obtained higher scores in this factor are factor 2 (rational behavior group) and factor 5 (careful calculation and strict budgeting behavior group). The number of the group is 94, approximately accounts for 30% of the total participants.

3.Duty-abiding group: The one received higher scores in this factor is factor 6 (duty-abiding group). The number of the group is 133, probably accounts 40% of the total participants.

Based on the results stated above, there is a group of people apparently like to go for

fashion-pursuing and with the tendency of fickle affection, they are willing to try fresh and fashion goods and regarded as good customers in marketers' eyes. Another group of people are rational shopping group who tend to be very careful calculation and strict budgeting; they are easy to be lured by discounts. Therefore, when making marketing strategies, marketers should focus on the topics to stress new functions or characters for fashion-pursuing group and emphasize the products' excellent quality and reasonable price for rational shopping group so that the consumers will be encouraged to make actual buying decision. The other group is duty-abiding group, they neither go for fashion nor make careful calculation and strict budgeting. They don't regard brand as an important factor when shopping, they think all the products are about the same. The way of their thinking is passive and hard to be changed in marketers' eyes.

4.3 Variance analysis

The study collected both the participants' attitude toward value and personality and demographics, which include gender, age, education, occupation and income. We conducted variance analysis for the five demographic variables and the nine factor scores respectively to examine how the participant's background will influence their consuming behavior.

4.3.1 Gender

There are four factors reached the significant level of 5% from the perspective of gender: the female tend to "fashion-pursuing"; the male tend to "adventure-taking"; the female tend to "careful calculation and strict budgeting" and "diligent in collecting information".

4.3.2 Age

There are three factors achieved the significant level of 5% from the viewpoint of age; the younger tend to "fashion-pursuing"; the older tend to "rational behavior"; the younger tend to "adventure-taking".

4.3.3 Education

There is one factor reached the significant level of 5%, we find that those participants who possess the education level of junior middle school tend to more conservative when they are making decision. It is estimated that it is because their disposable income is limited.

4.3.4 Occupation

There is one factor reached the significant level of 5% in terms of occupation. The participants who are students tend to behave more irrationally when they are purchasing.

4.3.5 Income

We find that there is one factor achieved the significant level of 5%: the ones with income less than \$20,000 NT tend to perform more irrationally. For the majority of the participants are students in this factor, they behave freely based on their ways. The outcome seems to be highly correlated with the above stated result.

5. Discussion and conclusion

Though the process of collecting data was to be representative at most, we would like to acknowledge the limitations of the study: First, the sample of the participants comes from Taiwan only, there exists sample bias inevitably. To enhance the generalizability of the study, future research may conduct cross-cultural comparison so that the outcome may be more referential. Additionally, as there are always new games and new users add into the group, the representative of the sample will be decreased as time goes by. Future researchers may avoid the above stated demerits by doing longitudinal research to ensure the result's reliability.

Based on the statements above, there are a certain amount of online game users possessing the traits of fashion-pursuing and fickle affection. Therefore, practitioners have to improve their products or services frequently to attract this group of consumers. On the other hand, to move the groups of rational and strict budgeting, marketers should promote the low-priced products. In sum, to serve different groups with refined various kinds of products or services are a better way to enhance market share.

On the variable of demographics, we find that "gender" is a key factor to influence on purchasing. Traditionally, the female tend to be more careful calculation and strict budgeting. There exists significant difference between genders; accordingly, marketers should take "gender" as an effective variable when making marketing strategies and to entice different groups of consumers by keeping innovating on products all the time. On the design of products, marketers should not only catch consumer's preference but also lead the wave of fashion to satisfy the demands of consumers with different kinds of occupation and income.

In short, in the era of information, the cost for consumers to acquire knowledge is relatively low. If only marketers can know well about the value and life style of consumers in the target market, surely they can grasp consumer's preference and make effective marketing strategies accordingly.

Appendix: Scale of the questionnaire

No.	Items
1	I often collect information from Internet.
2	I like to ask for suggestions from my relatives or friends before making buying decisions.
3	I like to ask for help from clerks when I am buying.
4	I think all the goods in the market are about same, brands are not important.
5	I like to buy a new product even the old one is not broken.
6	I think the function of new product or service is better.
7	I don't like to do the things that I am not confident in.
8	I like to make comparisons among different stores when I am purchasing.
9	It is better to abide by duties in our lives.
10	I am not patient to line up to buy goods.
11	I like to buy goods at the shops with plenty of commodities.
12	It is important for me if the purchasing location is convenient.
13	When I see my friends bought something, usually I like to follow them.
14	I think I can utilize my time and money very well.
15	Usually the goods with high reputation are better.
16	I like to put quality before quantity.
17	I like to go to high-priced restaurant when having appointments with my friend.
18	I like new products or services better.
19	My current daily life has been very good, it is not necessary to change anything.
20	I buy what I planned to buy only when the shop is on sale.
21	I like to go outing or camping to enjoy the nature.
22	I think the way I manage affairs is more effective than others.
23	I like to fix the minor breakdowns of some objects of my home.
24	I will not to try to use the product until many people have used it.
25	I like to make a bargain actively when I am buying.
26	I don't like to eat the food contains additives.
27	I like to pursue novel and fashion things.
28	I am a fashion person in people's eyes.
29	My dressing and adornments are about the same in the past many years.
30	I am a vivid and cheerful person.
31	It's easy for me to have fun time with those who meet me at the first time.
32	I am influential on my friends.

33	I am an introverted person;
34	I am independent and like to do everything by myself.
35	Usually I can effectively utilize my time.
36	When I make plans, I'm sure I can successfully perform the arranged plan.
37	I like to try different ways to do things.
38	I am the one who likes to pursue excitement and fresh lives.
39	I am willing to take adventure more than other people.
40	I like new things and are willing to try new products.
41	I do care if the objects that I bought can make me distinguished.
42	I like my things to be splendid.
43	I hope what I bought can be envied and praised by others.
44	I do care if the objects that I bought are in fashion.
45	The way I act is systematic and rational.
46	I am used to send things back to their original position after using them.
47	I do care that if my dining is regular.
48	I often feel lonely even I am with someone.
49	It is not difficult for me to deal with interpersonal relationship.
50	I am annoyed for my opinions were not adopted.

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