

소셜네트워크서비스(SNS)에서 재미진화모형

Fun Evolution Model for Social Network Services (SNS)

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ABSTRACT

소셜네트워크 서비스(SNS)를 사용하는 이유는 무엇일까? 게임, 정보의 검색, 시간 보내기, 단순한 반복적인 습관 등 다양한 이유가 있을 수 있겠지만, 가장 공통적인 이유는 재미(fun)이다. 그렇다면 사용자들이 SNS를 이용하면서 느끼는 재미의 개념은 무엇이며 이러한 재미는 어떻게 이루어져 있는가? 라는 의문을 갖게 된다. 재미 현상을 이해하는 것이야말로 SNS 현상의 본질을 이해하는 것이 될 것이며, 향후 개발되는 SNS의 많은 부분을 보다 재미있게 만드는데 필요한 단초를 제공할 수 있다는 점에서 매우 중요하다.

이에 본 연구에서는 (1)SNS 사용자가 어떤 종류의 재미를 느끼는지를 살펴보고, (2)재미를 구하기 위하여 어떤 행동을 하는지를 고찰하였다. 또한, (3)이러한 행동을 체계적인 설명을 위하여 SNS에서 재미를 구하는 가치 양식이 어떻게 달라지는지를 하나의 모형(재미진화모형)으로 제시하였다.

재미진화모형은 보기(seeing), 가지기(having), 하기(doing), 되기(being) 4가지 단계로 이루어지며, 각 단계로 진행되면서 몰입(commitment)는 커지게 된다. 보기단계에서는 사실 모든 SNS 행동에서 사람들은 가장 먼저 “보는 것”을 통해 재미를 느낀다. 가지기(having) 단계에서는 보는 것만으로 재미를 지속하기는 어려우며, 정상적인 경우 일정기간이 지나면 그 활동의 구성요소를 소유하고 싶어한다. 하기(doing) 단계에서는 가지기의 재미는 다시 발전하여 그 활동과 직접 관련된 행동으로 나타난다. 마지막으로 되기(being) 단계에서 동일시 과정이 발전하면 보다 성숙한 형태의 재미추구 양식이 나타난다.

Keywords: 재미, 소셜네트워크서비스, 재미진화모형

1. Introduction

Social Network Services (SNS) is a popular communication tool especially for current generation. Facebook, MySpace, Weibo and others become more in-trend as the introduction of better mobile devices

surfaces. Mobile devices such as smart phone, tablet PC, net book, camera embedded with Internet connectivity and other devices enable usage of SNS anywhere and anytime with cheaper and less effort. Furthermore, service providers also offer various services in support of SNS applications. The support of hardware, software and services ease users' usage of SNS. However, these are not the only factors that ensure usage among users. Therefore, this study is interested to study the usage SNS based on fun experience by users while using SNS.

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According to Xu, Ryan, Prybutok and Wen (2012), one of the factors that determine Social Network Services (SNS) usage is pleasure-oriented gratification of affection and leisure. According to them, there are eight gratifications of SNS which are affection, coordination, disclosure, entertainment, escape, immediate access, relaxation and stylishness. Affection refers to the adoption of SNS as a way to express their thoughts and feelings to friends; coordination refers to the adoption of SNS to organize social activities; disclosure refers to users' needs to talk to someone while using SNS; entertainment refers to usage of SNS as an entertaining tool solely for the sake of fun and pleasure; escape refers to usage of SNS to run away from current stress and pressure in real life; immediate access refers to usage of SNS to connect with others regardless of temporal and geographical limitations; relaxation refers to usage of SNS to feel relax and lastly, stylishness refers to usage of SNS as a symbol of status. Furthermore, Xu, Ryan, Prybutok and Wen (2012) also describe five common activities on SNS. The five activities are posting, viewing, sharing, replying and playing. Posting refers to users' act of publishing information such as status, photos, videos, events and others; viewing refers to users' act of viewing other people's published information; sharing refers to users' act of sharing information such as photos, videos, quotes, poems and others with other people; replying refers to users' act of replying to other people published information; and lastly playing refers to users' act of playing social games available on SNS.

When people talk about having fun, it usually related to activities that invoked fun. For example, participation in leisure activities is usually associated with the desire to experience fun. However,

for some people leisure activities are more than just an activity for them to spend time leisurely. Instead they are willing to spend time, money, effort and on top of that make sacrifices in order to participate in leisure activities. Ko Dong Woo (2004a) suggested that as a person participates in a leisure activity over a period of time, their behavior also change. The behavior change is an effort to achieve a person's means values - terminal values and instrumental values (Rokeach, 1968).

Previous studies focused on perceived enjoyment (Igbaria, Parasuraman and Baroudi, 1996; Yi and Hwang, 2003; Van de Haijden, 2004; Cyr, Hassanein, Head and Ivanov, 2007; Qiu and Benbasat, 2009; Lin and Bhattacharjee, 2010), cognitive absorption (Agarwal and Karahanna, 2000; Shang, Chen and Shen, 2005), flow (Hoffman and Novak, 1996; Korzaan, 2003; Jiang and Benbasat, 2004; Animesh, Pinsonneault, Yang and Wonseok, 2011) and others in trying to understand users' acceptance, usage as well as continuous usage. All these researches are interested to identify factors that contribute to this. There are studies done that included research models that consist of factors such as perceived ease of use (Teo, Lim and Lai, 1999; Agarwal and Karahanna, 2000; Moon and Kim, 2001; Lee, Cheung and Chen, 2005; Saade and Bahli, 2005; Lin, 2009; Lee and Chen, 2010), perceived usefulness (Agarwal and Karahanna, 2000; Saade and Bahli, 2005; Roca, Chiu and Martinez, 2006; Lin, 2009;), cognitive fit (Chung and Tan, 2004), perceived enjoyment and many others in order to empirically understand users point of view. Most of this study also contributed the discussion on intrinsic rewards including playfulness (Moon and Kim, 2001; Chung and Tan, 2004; Hsu and Chiu, 2004; Ahn, Ryu and Han, 2007; Chu and Lu, 2007), enjoyment, pleasure (Mathwick and

Riydon, 2004; Wulf, Schillewaert, Muylle and Rangarajan, 2006; Sen, Subramaniam and Nelson, 2008) as well as fun. Therefore, fun always has been a part of previous studies even though not the main focus. Furthermore, looking at collection of related researchers, fun always appear as one of the term used in describing the items in the measurement scale for similar constructs. Therefore, the focus on concept of fun in understanding the positive growth of Information Systems (IS) usage in general is critical at this point of time whereby most technology are no longer a novelty innovation that is difficult to be used by general users. Instead, the hedonic benefits that users experience while using IS are more important for the current generation of users.

Since late 2000, there is an increasing interest in mobile services. This is supported with various introductions of mobile devices into the market. Mobile devices such as smart phone, tablet PC and net book push developers and designers to create applications that usable through mobile devices. This in turn, increase users dependence on technology and improve communication and socializing done using technology. In this study, there are a few expectations: 1) adaptation of original fun evolution model to fun evolution model for SNS and 2) theoretical validation based on SNS activities. The adaptation of original fun evolution model will be based on previous works done related to acceptance and continuous usage of IS. Previous researches done with regards to usage of information systems (IS) are commonly focus on four aspects. Those four aspects are pre-usage, acceptance, usage and continuous usage. This study would like to expand those works by adopting evolution of fun model in explaining usage of SNS. Meanwhile the theoretical validation will be based on previous val-

idations done by Ko Dong Woo (2004a, 2004b).

II. Theoretical Background and Literature Reviews

1. What is experiencing Fun?

From the academic point of view, it is looking at fun experienced during various circumstances and various situations. Since fun is about individuals' psychological experience, it is a concrete representation but very complex because it may vary across individuals and also vary across situations. For example, when a few people is doing the same activity and asked how much fun and why are they experiencing fun while doing that activity, the answers are various across individuals. This means that while it is a positive experience, it is not an easy and straightforward psychological experience. As mention by McManus and Furnham (2010), fun is not a single concept but a complex phenomenon. This phenomenon has different meanings for different people. They also mention that fun can be an activity, a state or a trait. In using social network services (SNS), users describe having fun while using it and express it as sense of freedom, competence, sympathy, sense of adventure, sense of deviance, self-expression sense; and also interpersonal exchange senses such as loneliness, convenience and natural alternating feeling (Ko Dong Woo, 2002). All these expressions belong to two kinds of experience which are optimal arousal seeking and relaxation seeking; thus these two synchronously drives the psychological experience further (Ko Dong Woo, 2002 and Iso-Ahola, 1980).

According to Csikszentmihalyi (1990), fun belongs

to at least two common psychological dimensions under happiness experience which are pleasure and enjoyment. Pleasure is experienced as a mental mechanism of psychology; homeostasis which is achievable through entropy (flow of energy). Personal growth and maturity may determine pleasure is achieved through perception whether expectation is met or not. In other words, pleasure can only be achieved when an individual find that something met their expectation, which may be determined by the individual's personal growth and maturity. This may includes leisure activities such as sleeping and eating which brings pleasure. On the other hand, enjoyment is a psychological energy that needs to be fulfilled through specific activity and more will be created by accumulated energy. So, enjoyment is experience when an individual is accumulating energy rather than because it met your expectation. For example when an individual is reading, exercising or even talking. So, pleasure can be experienced even without investment of psychological energy but enjoyment cannot be experienced without the investment of psychological energy (Ko Dong Woo, 2002). Furthermore, pleasure is experienced over existing consciousness whereas enjoyment is experienced over new consciousness. In other words, enjoyment is experienced through optimal arousal rather than expected experience. Therefore, in conclusion, individuals will experience fun when individuals feel happiness and it also produces psychological reactions (Ko Dong Woo, 2002).

2. Fun Seeking Behavior

Whether consciously or unconsciously, in general individual searches for ways to achieve happiness

in their life. There are various reasons for the search of happiness but most individuals believe that one of the reasons behind living is finding happiness. Therefore, human struggle everyday search of happiness, whether in the form of bigger salary, spending time with family and friends, working hard in getting promotions at work, studying hard to enter good universities, doing charities for poor and sick people, entertaining other people on stage and even just doing nothing at all just to have fun. Below two theories are discussed to understand human's thinking in achieving happiness in their live.

2.1 Rokeach Value survey (RVS) - terminal values-instrumental values

Values are as central to the lives of individuals as well as to society as a whole. In fact, values can be classified into two categories: personal (individual) and social (institutional, cultural, and organizational). Rosenberg (1956) proposes that values are divided into terminal value and instrumental value. Terminal values refer to person's goals that they want to achieve within his or her lifetime. Meanwhile, instrumental values refer to preferable modes of behavioral. These values complement each other, specifying a general lifetime goal and identifying acceptable behaviors that can be used to reach that objective. For example, in order to achieve the terminal value of "family security", instrumental values such as "love", "self-control", "forgiveness", "helpfulness" and "capacity" are needed. Another example is to achieve the terminal value of "self-respect", instrumental values such as "ambition", "courage", "independence", "intellect" and "responsibility". Therefore, the terminal values are a representation

of preference of final state of existence, while the instrumental represent the kinds of preferential behavior to reach the terminal ones. Table 1 display the terminal and instrumental values as introduced by Rokeach (1973).

[Table 1] Terminal Values and Instrumental Values

Terminal Values	Personal Values
A comfortable life	Ambitious
An exciting life	Broad-minded
A sense of accomplishment	Capable
A world of peace	Cheerful
A world of beauty	Clean
Equality	Courageous
Family security	Forgiving
Freedom	Helpful
Happiness	Honest
Inner harmony	Imaginative
Mature love	Independent
National Security	Intellectual
Pleasure	Logical
Salvation	Loving
Self-respect	Obedient
Social recognition	Polite
True friendship	Responsible
Wisdom	Self-controlled

Every individual most likely has different set of terminal and personal values. This could be based on their background, belief, surrounding and numerous other factors. Gervazio, Giraldi and Costa (2012) conducted a study that verified dimensions of personal values dominating Brazilian people. For instrumental values, civility, self-direction, capability, conformity and ambition are important dimension and for terminal values, stability, self-accomplishment, security and hedonism. Their study is interested in cultural differences

because people from different culture are more inclined towards different set of instrumental and terminal values. Therefore, they introduced a few new values to accurately evaluate Brazilians.

According to Thornburg, Thornburg and Ellis-Schwabe (1984), Rokeach values can be divided into four types. This is according to their study on adolescents. The four types of values are: (1) concrete values that may be realized within the immediate time-frame of adolescence, (2) concrete values that are idealized by adolescents but functional for adults, (3) abstract values that may be realized or felts by individuals; and lastly (4) abstract values that are social constructs that one embraces but rarely has a chance to truly influence. The first value relates to true friendship and pleasure; and the second value relates to family security and sense of accomplishment. Meanwhile, the third value relates to happiness and self respect; and the fourth value relates to national security and world peace.

2.2 Means-end theory

The means-end theory referring to the linkages between the attributes that exists in products (means), the consequences for the consumer provided by the attributes and the personal values (the ends) the consequences reinforce. The theory approach is based on the assumption that consumers see products as a means to important ends and try to explain how the selection of a product or service facilitates the achievement of desired end-states (Gutman, 1982). The means-end chain model

developed by Gutman (1982) sustains the supposition that values are dominant factors in the pattern of consumer purchase; that these consider products or services based on the function of satisfying values; that all actions have consequences (desired or not); and, finally, that there is a connection between consequences and product or service attributes. The model is based on the attribute-consequence-value (A-C-V) sequence that forms a means-end chain.

Attribute refers to features or aspects of products or services. In the case of social network services (SNS), the functionalities that is available for users (e.g. communication tools, personalization options, storage capacity, etc.) and the appearance of the site (colors, logo, fonts, etc.). On the other hand, consequences are the outcome from consuming products or services. There are two kinds of consequences, functional as well as psychological (Chiu, 2005). Users experience functional consequences by directly consuming the product and users experience psychological consequences which is associated with the personal and social outcomes from using the product. Meanwhile, value is as defined by Rokeach which is divided into terminal value and instrumental value.

3. Acceptance, Usage and continuous usage in IS Studies

Previous researches done in explaining acceptance and usage of Information System (IS) are very important in understanding of users' behavior. In 1986, Davis (1986) introduced Technology Acceptance Model (TAM). This model is an

adaptation of Theory of Reasoned Action (TRA), a model from Social psychology. This model was developed for understanding user acceptance of IS. Two particular beliefs; perceived usefulness and perceived ease of use were included in this model that is primary relevance for computer acceptance behaviors. Therefore, Davis (1989) presented a well-accepted idea focusing on pursuing better measures for predicting and explaining Information Technology use. In the paper, the two new beliefs' measurement scales were developed, pretested and validated. These two constructs are widely adopted by other researchers in supporting their work. In the same year, Davis, Bagozzi and Warshaw (1989) presented their work on the ability of TRA and TAM to predict and explain user acceptance and rejection of computer-based technology. Their work discusses in detail the differences between these two theoretical models.

Taylor, Shirley and Todd (1995) studied three competing models which are TAM, Theory of Planned Behavior (TPB) and Decomposed Theory of Planned Behavior and suggested that TAM might be preferable if the sole goal is the prediction of usage. In 1996, Szajna did an empirical evaluation of the revised TAM. The revised version of TAM concerns about both the pre-implementation beliefs about usefulness and ease of use as well as the post-implementation beliefs about usefulness and ease of use. The results from this study suggest that the original model is sufficient enough to evaluate user's acceptance. However, the author also discouraging the substitution of self-reports usage for actual usage. Agarwal and Karahanna (2000) describe the concept of cognitive absorption. This construct is introduced in the theoretical model as an antecedent for perceived usefulness and

perceived ease of use. Cognitive absorption is defined as “a state of deep involvement with software”. This state is exhibit through 5 dimensions which are: 1) temporal dissociation or the inability to register the passage of time while engaged in interaction; 2) focused immersion or the experience of total engagement where other attentional demands are ignored; 3) heightened enjoyment which is capturing the pleasurable aspects of the interaction; 4) control which is representing the user’s perception of being in charge of the interaction and; 5) curiosity which is tapping into the extent the experience arouses an individual’s sensory and cognitive curiosity. This state is posited as an intrinsic motivation related and very critical in understanding users’ behaviors with information technology.

Venkatesh (2000) presented a model that comprise of control, intrinsic motivation and motion anchors that determine early perceptions about the ease of use of new system. Control is both internal and external control which conceptualized as computer self-efficacy and facilitating conditions. Intrinsic motivation is conceptualized as computer playfulness and motion is conceptualized as computer anxiety. The results from this study proposed that perceived ease of use are largely individual distinction variable and situational attributes, whose effects become stronger with experience. As user become more experience, characteristics of the user-system interaction play a role in driving perceived ease of use of the target system. Meanwhile, Venkatesh and Davis (2000) extend TAM by adding social influence processes and cognitive instrumental processes. Social influence processes consist of subjective norm, voluntariness and image and cognitive instrumental

processes consist of job relevance, output quality, result demonstrability and perceived ease of use. The results showed that both processes significantly influenced user acceptance. Meanwhile Moon and Kim (2001), adapted TAM in world-wide-web framework. Their study suggests that perceived playfulness should be considered in the design world-wide-web systems. In other words, developers should design their system to provide more attention, inquisitiveness and pleasure to users.

There are also previous studies that discuss on users’ belief and attitudes change during the course of using IS (Bhattacharjee and Premkumar, 2004). Bhattacharjee and Premkumar (2004) adapted expectation-disconfirmation theory (EDT). Their findings suggested that change tend to be more obvious during the earlier stages of using IS compared to the later stages. Furthermore, the role of disconfirmation and satisfaction are significant in driving usefulness and belief change. According to Zhou, Fang, Vogel, Jin and Zhang (2012), there are two streams of thought to explain user continuance behavior with new IS. The two streams of thoughts are satisfaction and commitment. There are differences between satisfaction and commitment (Zhou, Fang, Vogel, Jin and Zhang, 2012). Satisfaction is backward looking and commitment is forward looking. Satisfaction is based on past experience and even when a user is dissatisfied; it does not mean that he/she will not be committed to the systems. Additionally, satisfaction is not enough to measure the level of users’ loyalty compared to commitment. Furthermore, commitment is more enduring over time compared to satisfaction. Therefore, this study adapted commitment as the measurement of changes from one level to another level of fun evolution model.

It is expected that users in seeing stage has lesser level of commitment compared to having, doing and being. This is in accordance to the stages, starting with seeing, and followed by having, doing and being. In fact, users who are not committed to SNS might not move on to another level because their levels of commitment do not increase.

There are a lot of reasons behind users' usage of SNS. Kim, Shim and Ahn (2011) in their work, suggest four main motivations behind SNS usage. The four motivations are networking, relieving stress, recording one's history and collecting information. Networking refers to keeping in touch and maintaining communication with other people regardless of temporal and geographical limitations. SNS enable this and furthermore, tools embedded within SNS makes it interesting and lively for users. It is not just for two-ways interaction but also one-way interaction whereby users can monitor their friends' walls without direct interaction. Meanwhile, relieving stress enable users to use SNS as a way to be away from their stress and reality of live; and take a break for a while. This can be seen with users status updates on their wall mentioning their hectic days and so forth. The third motivation is recording one's history. Instead of the conventional way of keeping private journals, users are using SNS to record their daily activities, thoughts, emotions, and so on.

III. Fun in Information Systems

There are numerous studies done that related to fun in IS. Van Der Heijden (2004) study is one of the earliest that compared between utilitarian and hedonic IS. In this study, perceived enjoyment is found to be a stronger predictor for hedonic IS.

However, the terms that were used are not fun. Instead there are terms such as perceived enjoyment, flow, cognitive absorption, perceived playfulness and pleasure among the others. Below in Table 2 contains a collection of summarization of these related constructs.

The most common definition of perceived enjoyment adopted by previous researches is "The extend to which the activity of using the computer is perceived to be enjoyable in its own right, apart from any performance consequences that may be anticipated". It is a construct that is usually used to evaluate hedonic systems rather than utilitarian systems. Warner (1980) defined enjoyment using three dimensions which are engagement, positive effect and fulfillment. Lin, Gregor and Ewing (2008) in developing measurement for perceived enjoyment adopts this definition as the benchmark.

Meanwhile flow is a concept introduced by Mihaly Csikszentmihalyi (1991). It is an optimal experience achieved as "the feeling when things were going well as an almost automatic, effortless, yet highly focused state of consciousness". According to Chen, Wig and Nilan (2000); flow is an optimal, extremely enjoyable experience when an individual engages in an activity with total involvement, concentration and enjoyment. On top of that, individual also experiences an intrinsic interest and the sense of time distortion during his/her engagement.

Agarwal and Karahanna (2000) introduce the concept of cognitive absorption in technology usage. It is define as a state of deep involvement with software. Cognitive absorption state is exhibits through five dimensions and one of them

[Table 2] Similar Constructs in MIS Research

[Table 2-1] Perceived Enjoyment

Author	Definition	Antecedents	Consequences
Igbaria et al (1996)	An Intrinsic Motivation for the use of microcomputers.	Perceived complexity	System usage
Teo et al (1999)	Individuals may engage in a particular behavior if it yields fun and enjoyment. This implies that individuals may adopt technology because its use is enjoyable.	Perceived ease of use	Diversity of Internet usage, frequency of Internet usage
Yi and Hwang (2003)	The extent to which the activity of using a computer system is perceived to be personally enjoyable in its own right aside from the instrumental value of the technology.	Learning goal orientation	Usefulness, ease of use, application specific self-efficacy
Van de Haijden (2004)	The extent to which fun can be derived from using the system as such.	Perceived ease of use	Intention to use
Cyr et al (2007)	We expect that if users enjoy a website, they are more likely to have a positive attitude towards it and consequently visit it again or have e-loyalty towards that site.	Perceived social presence	e-loyalty
Hwang and Kim (2007)	The extend to which the activity of using a computer system is perceived to be personally enjoyable in its own right aside from the instrumental value of the technology.	Perceived web quality	e-trust
Qiu and Benbasat (2009)	The extend to which the activity of interactivity with the recommendation agent is perceived to be enjoyable in its right aside from the utilitarian value of the agent.	Social presence	Perceived usefulness
Lin and Bhattacharjee (2010)	Excitement and happiness derived from IT use.	Technical quality	Attitude

[Table 2-2] Flow

Author	Definition	Antecedents	Consequences
Hoffman and Novak (1996)	As the state occurring during network navigation, which is (1) characterized by a seamless sequence of responses facilitated by machine interactivity, (2) intrinsically enjoyable, (3) accompanied by a loss of self-consciousness and (4) self-reinforcing.	Control character, content character, process character, involvement, focused attention, telepresence	Consumer learning, perceived behavioral control, exploratory behavior, positive subjective experience
Korzaan (2003)	A state of mind sometimes experienced by people who are deeply involved in some activity.	None	Exploratory behavior, attitude
Jiang and Benbasat (2004)	Computer users' affective response to computer usage, characterizing playfulness and exploration as defining characteristics of human-computer interactions.	Visual control, functional control	None
Animesh et al (2011)	The perceived sense of intrinsic enjoyment obtained from interacting with the virtual environment.	Interactivity, density, stability	Intention to purchase

[Table 2-3] Cognitive Absorption

Author	Definition	Antecedents	Consequences
Agarwal and Karahanna (2000)	Heightened enjoyment: capturing the pleasurable aspects of in the interaction.	Personal innovativeness, playfulness	Perceived usefulness, perceived ease of use
Shang et al (2005)	Cognitive absorption was used to conceptualized flow experience as a state of perceived playfulness and tried to focus on the impact of intrinsic motivation on online shopping.	None	Perceived usefulness, perceived ease of use, shopping online

[Table 2-4] Perceived Playfulness

Author	Definition	Antecedents	Consequences
Hsu and Chiu (2004)	The extent to which the activity of using a computer system is perceived to be personally enjoyable in its own right aside from the instrumental value of the technology	None	e - service satisfaction
Chu and Lu (2007)	The degree to which he consumer believes that enjoyment could be derived when listening to online music.	None	Perceived customer value

is heightened enjoyment. This dimension demonstrates the state of pleasure whenever an individual performed certain activity in IS. In this dimension, there is absorption; and capture of pleasure and fun that users experience while interacting with a system. The earlier study of playfulness was done by Webster and Martocchio (1995) that focuses on microcomputer playfulness. The results from their study suggest that microcomputer playfulness is positively associated with satisfaction. Additionally, Moon and Kim (2001) suggest that perceived playfulness consists of three dimensions which are concentration, curiosity and enjoyment.

And lastly, fun was defined by Igarria, Schiffman and Wieckowski (1994). There are also a few other research fields other than IS that considered fun as one of the concept worth further investigation.

Those research fields are Human Computer Interaction (HCI) (Draper, 1999; Prensky, 2001; Sim, MacFarlane and Read, 2006), fun related to computer games (Choi, Kim and Kim, 1999; Johansson, 2009; Skalski, Tamborini, Shelton, Buncher and Lindmark, 2011), work and fun related researchers (Fleming, 2005; Rapuano, 2009; Tews, Michel and Bartlett, 2012) and fun in psychology that focused on time progression (McGlone, 2009, Sackett, Meyvis, Nelson and Sackett, 2010; O'Brien, Anastasio and Bushman, 2011).

IV. Fun Evolution Model for Social Network Systems

Figure 1 represented the four behavioral stages of fun evolution model for using Facebook. This model suggests that when individual belongs to

[Table 2-5] Fun (single dimension)

Author	Definition	Antecedents	Consequences
Igarria et al (1994)	An example of intrinsic motivation, referring to the performance of an activity for no apparent reinforcement other than the process of performing the activity per se.	Computer anxiety	Satisfaction, system usage

higher stage of fun seeking, more commitment is expected from him/her. For an example: You SEEING for using Facebook and enjoy it very much. So you end up buying and HAVING a Facebook login. After that, you start DOING by joining and playing with your Facebook users and also join your favorite Facebook user club (BEING). As an example from Information Systems (IS), in the case of Facebook users, you SEEING a lot of your family and friends use Facebook and you also start to be curious about it. So, you also register and HAVING your own Facebook account. And then you start exploring things that can be done on Facebook and start DOING it as well. Now you consider yourself as hardcore Facebook users (BEING) and cannot start your day without visiting your Facebook account. However, it is very important to highlight that each stage is not solely on its own but is an overlap with the other stages as well. For example, the beginning stage of being is an overlap with doing stage. Therefore, it is important to understand that each stage is not a stand-alone stage.

Social Network Services (SNS) such as Facebook, Twitter, myLink, mySpace and others are one of the common communication tools especially among the young generation. Kim and Lee (2011) work on facebook focus on how facebook increases college-age users' subjective well-being. The conclusions from their study suggested that the visualization facebook friends maybe the factor that derives happiness from number of friends. This visualization reminds the users of their social connection and subsequently affirmation or enhancement of their self-worth. There is a study that suggested dissatisfaction from using facebook motivates greater usage as a coping strategy and on

the other hand, satisfaction results from greater usage (Sheldon, Abad and Hinsch, 2011). Users keep using facebook even when they are dissatisfied to be able to experience satisfaction.

A study done by Klenosky, Gengler and Mulvey (1993) adopted value means-end theory in order to understand people behavior in ski resort. They figured out that everyone's ultimate value is to experience fun and excitement. So, skier continues skiing as it is an activity that creates enjoyment for its challenges. Furthermore, it also depends on the ski slopes which determine the difficulty level; and at the same time it should be time saving and money saving. Therefore, the mean-ends theory is a great theory to adapt in order to understand users' behavior in using IS. It makes sense to assume that users who are using IS have a common pursuit of wanting to experience fun. In addition, purchasing behavior is an example that buyers buy in order to own a product or get a service. This means that consumers' ultimate value of happiness is by seeing, having, doing and being. It is very similar to users of IS, they are also seeing, having, doing and being. Their ultimate value is to experience fun and achieve happiness by seeing, having, doing and being. In other words, they are having a IS application either by paying some amount of money for it or downloading it for free or just registering for it without downloading. Secondly, they are doing some activities through using the IS application and lastly they are being a part of the IS application by joining forums related to that IS application and giving ideas and suggestions. According to Ko (2002) work related to soccer fans, soccer fans go through four behaviors. These four behaviors are seeing, having, doing and being. As time evolved, soccer fans also will change their

behavior and move from one level to another level.

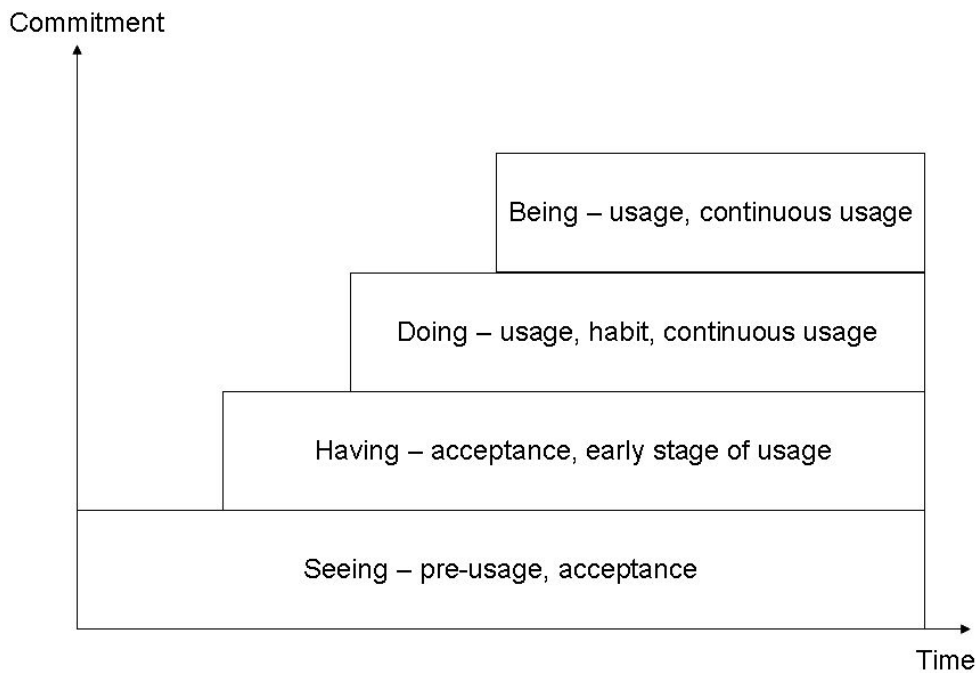
Sherif & Cantril (1974) is the founder of the early concept of ego-involvement. They focused on the activation of ego-attitudes that were considered to be representative of an individual's values, goals, standards and norms. The concept of evolutionary phase is trying to measure commitment level. The commitment level is measured according to strong attitude that is defined by ego-involvement. Previous researchers on this are divided into three which are commitment, issues involved and response involved (Taylor, Peplau & Sears, 1994).

Meanwhile, level of commitment and means for the commitment are usually classified into four categories (Chaiken & Stanger, 1987; Eagly & Chaiken, 1993). Firstly, any act by an individual based on certain attitude will increase the level of commitment. For example, when an individual bought a new computer, he/she believed that the new computer is better than the last computer and level of commitment will increase as well. Secondly, an act that is accompanied by a strong attitude will increase the level of commitment. Thirdly, when individual is free to determine his/her own attitude, the level of commitment will increase. And lastly, direct experience will increase level of commitment compared to indirect experience. For example, when consumer is exposed to certain product before purchase, he/she will have a stronger attitude towards that product compared to exposure after purchasing (Wu & Shaffer, 1987). Eventually, self-expression attitude, positive attitude, formation of attitudes voluntarily and direct experience determine the level of commitment of individuals. Furthermore, level of commitment changes according to attitude that individuals have towards certain activity, product, service and others.

According to Zhou, Fang, Vogel, Jin and Zhang (2012), there are two factors that determine intention to continue to use Internet-based social virtual world. These two factors are affective commitment and calculative commitment. Affective commitment refers to being attracted to (desire-based attachment) and calculative commitment refers to being locked in (degree to which an individual continue to use because of potential costs of discontinue). At the earlier stage of usage, users are affective commitment but as they continue to be dependent on the technology, it becomes calculative commitment.

So, in the case of IS applications, when users already have an attitude about it, act upon their attitude, free to choose and experience it themselves; all these may change the level of commitment they have towards specific application. Therefore, below in Figure 1 is a figure that adapted Ko (2004a, 2004b) focusing on users usage of IS applications. Looking at Ko (2002) works, it makes sense for IS users also to go through the four behaviors which are seeing, having, doing and being.

Seeing - All types of leisure activities started with seeing. This act of seeing could be watching television, watching a real soccer match, listening to radio, talking to a group of friends and many more. In this stage, it is expected that the commitment level is pretty low. However, as time passes by, this will change. People will start to be more committed and want to get more involve with the activity. One of the most influential media of seeing is the mass media such as television, radio, magazine, newspaper, Internet and others. Therefore, seeing can be divided into indirect (through mass media, listening to other people's



[Figure 1] Fun Evolution Model for SNS

experiences, stories and etc.) and direct seeing (attend real match at the stadium, attend musical play at theater and etc.). In the case of SNS, users heard from radio, music, television, friends; read from magazine, book, newspapers; see other people using; browse SNS site and even register for an ID. However, this stage is only focused on people's seeing, hearing and similar acts like that. This stage can be compared to pre-usage or acceptance stage in previous studies. During pre-usage or acceptance stage, users are novice users with minimal experience with an application. Furthermore, users are not keenly interested and have the less commitment to the application. Therefore, positive outcomes gain from the experience may lead users to continue using the application.

Having - After a period of time, just seeing is no longer fun. Under normal circumstances, after a period of time, people will want to feel more related or feel sort of ownership over a leisure

activity. This will encourage them to migrate from seeing stage to having stage. For example, if the activity is related to sports. Instead of just watching a match on television, listening to the match live broadcast on radio or watching the real match at the stadium; individuals will buy sports clothing, sports equipments and jerseys; and get signatures from favorite sport's stars. All these acts present a sense of having. An individual may even want to be involved in gatherings related to their leisure activities. These gatherings discuss and share their thoughts and opinions about their leisure activities and with the existence of Internet, these easily can happen online instead of offline. During having stage, level of commitment and involvement in the activity is greater than during the seeing stage. In this stage, SNS users are interested to learn about SNS. They are not satisfied with just owning an account but want to learn more about it. Therefore, they will try to find ways to learn more about it.

Having stage is comparable to acceptance and earlier usage stage in previous studies. In this stage, there are users who voluntarily willing to explore and learn more about the application. This group of users has a bigger tendency to migrate to doing stage. However, there is also group of users who is happy to just being in this group without learning more about the application. Hence, they just remain in this stage.

Doing - In order to have more fun, individuals migrate from having stage to doing stage. In this stage, there are two forms of doing. The first form is the earlier stage of doing which is imitation. During childhood, people imitate their favorite superhero such as superman, batman, power rangers and others. This is one form of doing. The second form of doing is fandom. In an extreme case of fan support and fandom, an individual try to be as close as possible to their idolized star. Every move of the idol is not only monitored but closely observed. He or she is willing to sacrifice time, energy, effort, money and whatever necessary for the sake of the idolized star. This is now a part of life. The excitement of idolizing a star is a turbulent state which is no doubt invoked fun. This dependent phenomenon is very similar to the feelings of being in love and feeling dependent on another person. In this stage, SNS users are more interested to do something more with SNS. They already explored SNS in having stage and are no longer content with just having, instead more interested to use SNS as part of their routine life. Therefore, users in this stage usually spend more time using SNS compared to users in seeing and having stage. Furthermore, in this stage users are more likely to be obsessed over usage of SNS. Even the thoughts of not being able to access SNS

leave them distraught. In this stage, exposure to the application is bigger and similar to usage stage of previous studies. Furthermore, users might also develop habits of using the application. Based on previous studies, once users develop habit, the usage of an application is no longer with conscious effort instead it is automatic (Limayem and Hirt, 2003; Limayem, Hirt and Cheung, 2007). In this scenario, definitely the level of commitment is bigger than those in seeing and having stage.

Being - From doing stage, individuals migrate to a more mature form of fun seeking. This stage is called being. In this stage, individuals can separate themselves from their idols but with the desire to share the knowledge about their idolization with others. Sharing feelings and thoughts with other people create synergies. This stage is not an individualistic stage but require informal collective action with other people. In this stage, SNS users are interested to be apart of development and improvement of SNS as a whole. Simply using is no longer fun, but to be able to create and design SNS has more charm. However, in this stage, rather than unhealthy obsession, it is a healthy obsession that requires highest level of commitment with the motivation to create better SNS for consumption of general public. There is a high sense of ownership and belongingness among this stage of users. They have the highest level of commitment and loyalty towards SNS compared to other stages of users. This is the highest stage in fun evolution model. In this stage, it went further than just using an application. Instead users are interested to be apart of the application itself. Users want to have a say in the development of the application. They want to give advice and talk about the application as if they are presenting the

[Table 3] Seeing Measurement Items

No.	Seeing- Measurement Items
1	I enjoy seeing other people using SNS.
2	Even just reading someone's comment on SNS makes me happy.
3	I enjoy communicating with other people through SNS.
4	I already registered and received an ID to my favorite SNS.
5	Through SNS, I searched people that I know.

application itself. The act of just using the application is not enough anymore, therefore the level of commitment they have towards the application is biggest compared to those users in seeing, having and doing stages.

V. Research Methodology

In total two studies were conducted, study 1 and study 2. Study 1 is a pilot study and study 2 is the real study. There are two main important parts in both studies which are related to the stages in fun evolution model. The first part is the identification of users' stages. In this study focusing on SNS, there are four stages of fun evolution which are seeing, having, doing and being. Each stage is represented by a set of items as presented in Section 5.4.1 below. A set of items were presented to a group of SNS users. These items represent activities at seeing, having, doing and being stage. Users were asked whether they agree or not with each statement. The statement may be an experience they had before or a current situation they are in. Based on the 'yes' and 'no' reply, the results were analyzed to determine each user's stage. After the identification of users' stages, one-way ANOVA will be conducted to evaluate users' commitment level.

In order to develop the most appropriate items to identify users' fun evolution stages, the first

step taken in this study was to develop a set of items for each stage. The initial set of items for each stage is bigger than the finalized version. Initially a simple pilot study was conducted to evaluate the items and the results gathered from the pilot study produced the finalized version of items as shown in Table 3, 4, 5, 6 and 7.

1. Instrument

The measurement scale for this study consists of three main parts. The first part is the demographic section, followed by the four stages of fun which are seeing, having, doing and being. The measurement items were developed based on the definition of each stage as discussed in previous section of this paper. And lastly, the third part is commitment measurement items. The commitment measurement items are adapted from Blau (1985). Below in Table 3, Table 4, Table 5 and Table 6 contains the measurement items for seeing, having, doing and being. Meanwhile Table 7 contains the measurement items for commitment.

2. Survey Administration and Data Analysis

A survey was conducted in order to collect the necessary users' information, to conduct among university students in South Korea.

[Table 4] Having Measurement Items

No.	Having- Measurement Items
1	I enjoy leaving comment about my opinion using my SNS' ID.
2	I enjoy meeting new people through SNS.
3	I am bored when I am not able to access SNS.
4	I am an active member of online community created by fellow users' of my favorite SNS.

[Table 5] Doing Measurement Items

No.	Doing- Measurement Items
1	I enjoy if I can lean more about SNS through people around me, magazines, newspapers, television, radio and various other sources.
2	I always participate in all in-trend activities (eg. playing games, watching videos) on SNS.
3	By using SNS, I always update my status and leave comments.
4	I enjoy sending message to people I know through SNS.
5	I enjoy sharing information with other people through SNS.

[Table 6] Being Measurement Items

No.	Being Measurement Items
1	I like to be able to access SNS at all time.
2	I feel anxious when I am not able to access SNS.
3	I am (want to be) involve with development of SNS.
4	I want to give advices regarding the improvement of SNS.
5	Through SNS, I get to know true friend.

[Table 7] Commitment Measurement Items

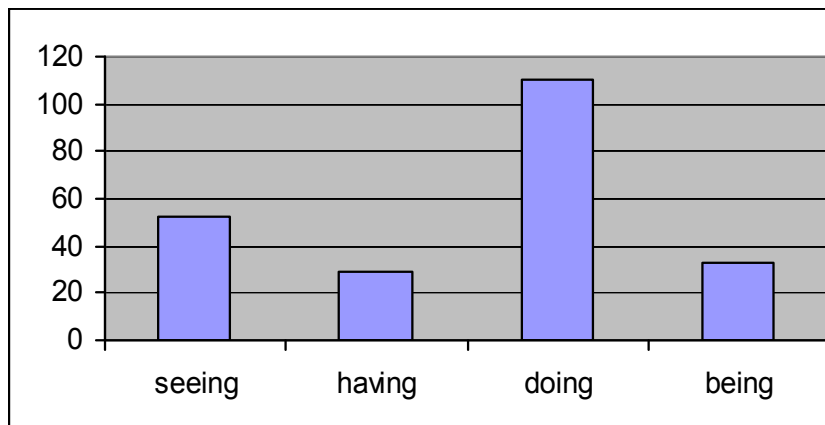
No.	Commitment- Measurement Items
1	I really like SNS so I will never stop using it.
2	If I could do it all over, I would not choose SNS. (reverse)
3	I will continue using SNS to build up my career.
4	Even if there is a more enjoyable activity, I will still continue to use SNS.
5	SNS can be an opportunity to experience greatest pleasure in life.
6	Through using SNS, it brings meaning to life.

[Table 8] Demographic Characteristics of the Sample

Characteristics		Frequency	Percentage
Gender	Female	93	41.9
	Male	129	58.1
Age	20 - 22 years old	121	55.2
	23 - 25 years old	81	36.7
	26 - 28 years old	18	8.1
Year	First	1	0.5
	Second	62	28.1
	Third	94	42.5
	Fourth	64	29.0
Average Usage per Day	Less than one hour	50	22.3
	1 - 2 hours	75	33.5
	2 - 3 hours	46	20.5
	More than 3 hours	53	23.7
Frequency of Usage per Day	None	9	4.0
	Once	8	3.6
	2 - 3 times	39	17.4
	4 - 5 times	36	16.1
	6 - 7 times	30	13.4
	8 - 9 times	18	8.0
	More than 10 times	84	37.5
Duration of SNS Usage	Less than 1 year	25	11.2
	1 - 2 years	89	39.7
	2 - 3 years	58	25.9
	More than 3 years	52	23.2

The survey successfully collected 224 valid respondents. All respondents are undergraduate students in two majors, Business Administration and Tourism Management. Below is Table 8 which

contains the demographic characteristics of the respondents. Out of 224 respondents, two of them did not disclose their gender; three of them did not disclose their age and year of study. From the data



[Figure 2] Frequencies of Each Stage (Seeing, Having, Doing, Being)

[Table 9] Results of Reliability Tests

Construct	No of items	Mean	Standard Deviation
Seeing (yes = 1, no = 0)	5	0.741	0.212
Having (yes = 1, no = 0)	4	0.455	0.294
Doing (yes = 1, no = 0)	5	0.562	0.308
Being (yes = 1, no = 0)	5	0.214	0.257
Commitment 7 - Likert scale	6	3.593	1.058

[Table 10] Stage of Fun Seeking against Commitment (ANOVA)

	SEEING	HAVING	DOING	BEING	F value
Commitment Mean (s.d)	2.734(0.857)	3.138(0.963)	3.918(0.886)	4.263(0.966)	29.043

[Table 11] Scheffé's test Results (Stage of Fun Seeking against Commitment)

Fun Evolution	Stage	Mean Difference	Significance
Seeing	Having	-0.404	0.294
	Doing	-1.184	0.000
	Being	-1.529	0.000
Having	Seeing	0.404	0.294
	Doing	-0.780	0.001
	Being	-1.125	0.000
Doing	Seeing	1.184	0.000
	Having	0.780	0.001
	Being	0.344	0.298
Being	Seeing	1.529	0.000
	Having	1.125	0.000
	Doing	0.344	0.298

gathered from 224 respondents, one-way ANOVA was conducted. This analysis was conducted using SPSS. Figure 3 is a bar chart that shows the number of users' stages. Among the 224 respondents, 52 of them belong to seeing stage, 29 belong to having stage, 110 belong to doing stage and 33 of them belong to being stage. Meanwhile, Table 9 contains the means and standard deviation

for every construct.

In Table 10, results from one-way ANOVA are presented. The groupings of the 224 users are based on their stages. The F-value of 29.043 is significant to explain the variance of the group means. This means that there are differences in between the means of each group/stage. As the number of users for each stage is not the same,

Scheffé's test was conducted to figure out where the differences lie. Meanwhile Table 11 shows the results of Scheffé's test. As mentioned earlier this test was conducted to figure out where the differences lie in. This test was conducted looking at users' stage against their commitment level.

VI. Discussion and Conclusion

1. Discussion

The first part of this study is a pilot study. The results from the pilot study show that only commitment is significant on the mean between users' stages, meanwhile duration is not significant. Duration in this study refers to the amount of time users have use SNS. This result is not surprising as users' experience of using a technology cannot solely be explain by the duration of usage. There are users who are intensive users and there are users who are just frequent users. Therefore, duration is not important to explain users' stage differences but commitment is very important to explain users stage differences. Results for pilot study show that users in seeing stage has less commitment level compared to users in having, doing and being stages. The commitment level increases as users move from seeing stage to having stage, from having stage to doing stage, and lastly from doing stage to being stage.

This study was conducted to adapt fun evolution model for social network services (SNS).

As the original development of the evolution model is for leisure activities, it is acceptable to adapt it for SNS. However, stages of seeing, having, doing and being for SNS need to be identified differently because of uniqueness of this activity.

Therefore, the first step is identification of users' stages in fun evolution model. Based on the results gathered, out of 224 respondents, 52 is in seeing stage, 29 is in having stage, 110 is in doing stage and 33 is in being stage. It is not a surprising result because in any technology usage, it is expected that the earlier stage (seeing and having) will be quite minimal as well as the later stage (being). Furthermore, since SNS is a technology that requires some sort of interaction and action from users, doing stage has the most number of users compared to other stages.

After the identification of users' stages, the second part was conducting one-way ANOVA to check the commitment level of each stage. The results showed that users at seeing stage has lesser level of commitment, followed by users at having stage, doing stage and being stage. This is a confirmation of the initial expectation of this study.

Users' at being stage are the one who are most committed with SNS usage compared to other stages. Furthermore, the type of activities that users are willing to do is different according to their stage. Users who are in seeing stage are only interested with simple, unobtrusive activities. They are willing to explore and update themselves with SNS but not to the point of making extra effort for it. Meanwhile, users in having stage are more willing to explore and learn about SNS. They are also interested to have some memorials or materials related to SNS that can help them to learn more about SNS. On the other hand, users in doing stage are more willing to do something using SNS. However, users who are in being stage is the one who goes beyond users in seeing, having and doing stages. They are willing to devote money, time and effort for SNS. They are having while

being with people who enjoy SNS as much as they do. They go out of their way to learn more and want to contribute to the development of SNS for the sake of improvement. Regardless of users' stage, it is important to understand that each stage does not stand solely on its own. Instead there are overlaps with the previous and the next stage. For example, having stage has an overlaps with seeing stage and doing stage.

There are a few limitations in this study. Firstly, this study was conducted among university students who are mostly in their early 20's. By considering their age and the era that they were born, their usage of SNS might be slightly different compared to people in their teens, 30's, 40's and older. However, this can only be confirmed by extending this study beyond university students. Second limitation is the inclusion of only South Koreans as the sample. South Korea is known to have the most developed technology and the fastest Internet connectivity in the world. This advancement may alter the way they view SNS usage in their daily life. The ease, comfort and routine usage of SNS that freely available for them may influence their commitment. Instead people who are living in developing countries or poor countries or even rural areas of developed countries might have different view of SNS. Secondly, another limitation of this study is the lack of data on respondents' motivation in using SNS. This study was not designed to identify users' motivation. However, the lack of data on this reduces this study ability to explain user's usage with more depth.

2. Conclusion

This study investigated the commitment level of

users according to fun evolving model. It is important as an exploratory study for SNS usage. The results suggested that identification of users' level of commitment can be determined by knowing the user's stage in fun evolving model. Therefore, further study can be done using this model to understand users' usage of SNS. This will help not only SNS researchers but also helpful for developers of SNS.

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● 저 자 소 개 ●



권순재 (Soon-Jae Kwon)

성균관대학교 경영학과에서 박사학위를 취득하였다. 현재 대구대학교 경영학과 교수로 재직하고 있다. 지식경영학회, 경영정보학회, ICIS 회원으로 활동 중이며, Journal of MIS, Information & Management, Decision Support Systems, Cyber Psychology and Behavior, Behavior and Information Technology, Expert Systems with Applications 등에 논문을 게재하였으며, 이외에도 삼십여편의 국내연구가 있다. 현재 관심분야는 SNS에서 재미, 정보시스템 사용자 행위론, 온톨로지 등이다.



고동우 (Dong-Woo Ko)

고려대학교 심리학과에서 박사학위를 취득하였다. 현재 대구대학교 호텔관광학과 부교수로 재직하고 있다. 한국심리학회, 한국소비자학회, 한국관광학회의 회원으로 활동 중이며, '여가학의 이해'(2007, 문화관광부 우수학술도서), '관광심리학'(2013) 등을 저술하였고, '여가경험의 동기와 체험' 등 약 70여편의 연구 논문을 발표하였다. 여가관광심리학을 전공으로, 재미진화모형, 여가동기의 이중추동모형, 이중통로 여가체험 모형 등의 이론을 개발하였고, 여가경험과정, 재미, 여행치유 등에 연구 관심을 가지고 있다.