

# The Influence of Personal Character on Information Communication and Activity Effect — Taking Non-Profit Cultural Events as Examples

## Abstract

Among the many enterprise management strategies, holding activities is usually one of the strategies used to achieve their goals. However, from a non-profit organization's point of view, the aim of holding an activity focuses more on the effect of information communication. This study takes one example of non-profit organizations, universities, as the study object; university students as the study target groups; and campus art and cultural activities as the products and services of these non-profit organizations, universities, provide. It takes the personal characteristics of the students as segmentation variables to divide this group in order to study if these personal characteristics have an influence on the effect of the information communication of the cultural activities on campus. In other words, it is to examine groups with different personal characteristics: the degrees of influence on the information communication from cultural activities, the cognition and evaluation of these activities, and the differences among their attitudes, in order to evaluate the effects of activities.

This study builds a relative adaptation model to find out the information communication effects of campus cultural activities, and use this relative model to verify every factor that influences the effect of communication and show how they interact with each other. It will then compare it to groups with different personal characteristics and see how much differently they react to cultural activities. Consequently, groups with different personal characteristics have shown obvious differences according to their conditional structures towards the effect on cultural activities information communication; therefore, they have shown different factor-result structural relationships.

Key words: personal character, information communication, cognition, evaluation, attitude

## 1. Background and Motivation

Different enterprises usually hold all kinds of activities to achieve their goals as a business strategy, for example: enterprises hold public-service activities to create a positive image; they hold promotional activities to attract customers and increase sales; they use advertisements and commercials to spread the effect of information communication. The aim of these activities is to gain profit and nothing more. Conversely, non-profit organizations focus on the effects of information communication when holding activities, for example, they may wish to increase the participants' cognition of activities, to reach consensus within organizations, or to promote activity participation. No matter what the aims are, under the consideration of promoting the activities and achieving the best results, to choose the best methods, to hold the most appropriate activities for the right chosen target groups in order to gain the best result is worth thinking over. However, from the point of view of dividing markets in business management, there is no activity that is suitable for everyone, which is the reason that to plan out appropriate activities for the right target groups is a decisive factor.

In recent years, universities in Taiwan have tried their best to plan cultural activities so that students will have chances to gain a wider variety of experiences on campus, during their time at university. They hope that through immersion in these activities students will become more spiritual, open-minded, and develop other interests to raise the quality of life beyond academic pursuits. Will the information given and the activities offered interest and stimulate the students' will to participate and achieve the expected effect? Universities should look into these questions after holding activities and discover the answers. Most universities devote a huge amount of resources to holding cultural activities, but they seldom evaluate the effects of these activities, let alone study the relationship between students

with different personal characters and the varied effects of these activities upon them. This is the motivation of this study.

This study sees views universities as non-profit organizations and university students as target consumers. It takes cultural activities held on campus as services or products that the non-profit organizations provide, and the students' personal characteristics as segmentation variables to divide this group and to discover how students' personal characteristics influence the information communication effects of campus cultural activities. In other words, it is to study groups with different personal characteristics that are under influences of cultural activities; how much they recognize and evaluate these activities; and if there is a difference among their attitudes in order to assess the effects of activities.

There are nine categories of cultural activities: art, music, theater, dance, folk, movie, lecture, research and study, and others (Taiwan Council for Cultural Affairs 2002). The cultural activities on university campus are not beyond the scope. This study defined "campus cultural activities" as free activities (lecture, music, theater, opera, dance, visual art, etc.) which are provided by non-profit organizations like universities.

This study takes the point of view of business management of enterprises, using the concept of information communication effects to discover how students with different characteristics have different cognition, evaluation and attitudes towards cultural activities that are held by non-profit organizations, which here refers to "universities" to evaluate the results of these activities. Gaining profit is not the goal for these non-profit organizations; therefore, the main goal for the activities focuses on non-financial information communication. This study mainly uses communication effect as the basis to evaluate activity performance, and takes the advertisement attitude model and communication effect as a basis theory in order to ensure the

variant evaluation and to build and verify a structural relationship model among all factors.

## 2 Literature Research

### 2.1. Influence Factors of activity effect

#### 2.1.1. *The influence from getting in touch with activity information*

Getting in touch with activity information is the first step of the communication process. After getting activity information, cognizance and affect will grow within students which lead to the behavior of attending activities. Craik and Lockhart (1972) pointed out that memory is the result of successive series analyses of stimulation from what one has touched; therefore, getting in touch with information is the source of memory. Rethans, Swasy & Marks (1986) further pointed out that commercial repetitions or the constant appearance of this information increases consumers' ability to recall. Lavidge & Steiner (1961) built a commercial persuasion model which separates persuasion process into three stages: cognition, affect, and action. After getting commercial information, consumers notice, understand, memorize, accept, and then learn the message that commercials try to deliver, which leads to the growth of affect, interest, cognition and belief. Through these commercials, consumers evaluate products which influence the purchasing will and behavior. (Edell and Burke 1986 ; 1987) Consequently, getting in touch with activity information is the primary requirement that causes memories and trigger personal intention and behavior. It directly influences affect, evaluation and belief.

Consumers might receive two kinds of attitudes from getting information. One is the quality of the information itself, and the other is cognition and affect. (Shimp 1981, 1986) Cognition and affect also represent thinking and feeling. (Vakratsas and Ambler 1999) ° Abelson et al. (1982) said that the difference between *cognition* and *affect* is that cognition is personal evaluation to outside stimulation which builds a belief because of the stimulation; however, affect reflects personal inner feelings that sets off evaluation. Some focus on how advertising information affects feelings and beliefs, (Edell and Burke 1989, Garbarino and Edell 1997) and some research into the relationship between consumers' purchasing intention and advertising information. (Ko and Park 2002, Baker and Lutz 2000) Both researches have proven that getting

into contact with information is an important source that sets off feelings, evaluations, and beliefs.

According to the theories above, this study addresses hypotheses as follows:

H1: There is a significant relationship between contact with activity information and the feelings that the information.

H2: There is a significant relationship between information contact and information evaluation.

H3: There is a significant relationship between information contact and activity belief.

H4: There is a significant relationship between feelings that have been set off because of activity information and information evaluation.

#### *2.1.2. The relationships among feeling, belief, evaluation, and attitude*

In the frame of attitude concept that Rosenberg & Hovland (1984) proposed, they thought that in order to understand how information affects the receivers' attitude, beliefs, and actions, they must understand how attitudes are formed and changed. They thought that outside information stimulation and scenarios would be the first to influence receivers' attitudes, then to influence their actions. Thus attitude is the main variable that affects actions. Since advertising attitude is considered as a variable which affects the intentions and actions of consumers, in regards to campus cultural activities, information contact would activate beliefs and feelings which would not only cause activity evaluation; it would also affect behavior intention through attitude.

Edell and Burke (1986, 1987) suggested a more complete and variance related advertising attitude model. Many scholars use this model in the field of marketing to discover the cognition and effects of commercials. (Burke and Edell 1989) From the relationship between the components of this model, we can see that advertising information contact evokes beliefs and emotional responses; on the other hand, the beliefs, feelings, and evaluations have a casual relationship and could cause an influence on

attitudes towards different brands. Among the connections, we can see that the feelings evoked by contacting advertisement are an important factor that affects consumer attitudes. In other words, the more advertisement evokes the emotional responses of consumers, the more positive attitudes the consumers will have; and when consumers have positive attitudes towards the advertisement information, a positive attitude towards the products will be produced.

Attitudes do not only form from feelings, they are also affected by beliefs and evaluations. Park and Mittal (1985) discussed an integrated communication effect model, in which they think feelings include the involvement of emotions. Therefore, feelings have the power to affect attitudes and intentions. After personal information contact, the consumer must agree with the statement of an advertisement, and then he will have feelings towards the product. After having feelings towards the product, the consumer will evaluate and to have beliefs. The evaluation result is the formation of attitudes. If the attitude is positive the consumer will in due course have the desire to purchase or to become involved. As a result, there is an interactive relationship among consumer's information emotional responses, evaluation, and advertising attitudes.

Lutz et al. (1975, 1983) emphasized that the process of advertising information has an affect on the consumer's purchasing intention. He then suggested four models based on advertising attitudes and these models are applied in many studies. (Lutz 1985, Mizerski and White 1986, Park and Young 1986, Batra and Ray 1986) In these four models, there are different factor-and-result relations; basically the influence that consumers have to information is considered through the layer influence pattern: cognition→attitude→intention. Attitude is the main variable among all.

According to the points above, this study addresses hypotheses as follows:

H5: There is a significant relationship between feelings that are caused by activity information and activity attitude.

H6: There is a significant relationship between activity belief and activity attitude.

H7: There is a significant relationship between activity evaluation and activity attitude

### *2.1.3. The participation desire, the action of attending, and evaluation of activity effect*

The main ways to evaluate advertising effects can be sales effect and communication effect. If the advertising effect is evaluated directly by judging from the sales of the product, it is called *sales effect*. If it is judged by the audience rate, listenership, product popularity etc. to indirectly evaluate the sales of the product, it is called *communication effect*. (Lavidge & Steiner, 1961) From the point of the activity effect evaluation basis within this study, the aim of campus activities is to increase the students' desire and attendance of these activities. Thus, the desire of attending activities, the action of attending activities, and activity-effect evaluation are the main concern factors, just like the sales situation in the sale effect, and indirectly promoting products in the communication effect. The intensity of these effects is based on the students' attitudes towards the activities.

The attitude that students have to campus cultural activity information is like the attitudes that consumers have to advertisement. Mitchell & Olson (1981) et al. pointed out that advertising attitudes will directly affect consumer's feelings, and affect the brand attitude and the purchasing desire. (MacKenzie & Lutz, 1989) In Mitchell & Olsen (1981) and Shimp's (1981) study results, we also found out that consumer attitudes towards advertisement is the key point in deciding their brand attitude. Lutz & MacKenzie (1989) said that depending on a specific type of advertisement that consumers receive at a specific time, consumers then produce responses of cognition or ignorance. In other words, consumers evaluate the advertising

information which is the variable of affecting advertising effect. It affects the consumer's feeling towards the advertisement itself, and so affects brand attitude and the desire of purchasing the product. (Lutz, Mackenzie, & Belch 1983) We can see that the evaluation of advertising information, and advertising attitudes are the main variables of brand attitude and purchasing desire.

Many scholars use the concept of layer effect, which is: awareness → understanding → fondness → preferences → conviction → purchase (Lavidge and Steiner 1961), to study the performance of advertising effect. (Bendixen 1993, Leone 1983, Bendixen 1991, Vaughn 1980, 1986, Rosen 1989, Wu 2001) Based on this concept, the students' desire to participate in campus cultural activities according to the activity information comes from the activity attitude and evaluation. The intensity of participating desire then affects the actual action of attending activities. After attending activities, then effect evaluation is formed.

From these statements, we can see that the information communication effect is affected by the consumer's cognition, feelings, and evaluation to information. Then preferences and attitudes are formed. Through the variances of different attitudes, consumers decide the actions of attending activities and then evaluate the performance.

According to the points above, this study addresses hypotheses as follows:

H8: There is a significant relationship between the activity information evaluations to the desire to participate activities.

H9: There is a significant relationship between activity attitudes to students' desire to participate in activities.

H10: There is a significant relationship between students' desire to participate in activities to the actual action of attending activities.

H11: There is a significant relationship between the actual action of attending activities to the evaluation of activity effects.



## 2.2. Personal Character

Personal character is an important influence factor on behavior intention and real behavior. Based on casual observation, many marketing managers believe that consumers' behavior intention is congruent with their lifestyles and personalities [43]. A consumer's lifestyle and personality influences their attitude and purchase behavior [67]. A major field in behavior research is the prediction of behavioral intentions and real behavior with personality or lifestyle traits. The articles found individual behavior to be influenced by personality traits and the personal characteristics of the person [62, 35, 36, 20]. McAdams [50, 51] suggested that personality psychology should study the person in terms of a three-tiered framework involving three separate but overlapping levels of analysis: personality traits, personal concerns, and life stories [12] that were included in personal character. Thus, in order to understand college students' involvement intention and behavior at cultural activities, we must explore students' personal character. This study based on McAdams [50, 51] helps to design a questionnaire to ascertain the personal characters of students.

The personal character is a useful segmentation variable. In order to find behavioral differences, some articles segment the market by consumer personal character [71, 73, 42]. Personal character takes into account many individual characteristics, such as personality and lifestyle [52, 65]. The personality and lifestyle variances are significantly related to characteristics of decision, which aids and impacts decision makers' behavior [58, 48]. Many articles show consumer behavior has been linked to personality and lifestyle [40, 53, 49]. Thus this study identified personal character as the combination of an individual's lifestyle and personality. In this study, personal character which included personality traits, lifestyle and personal concerns were chosen as the bases for segmentation because of their impact on a wide range of specific everyday individual behaviors. Then the study focus on different personal character clusters to evidence the difference of cultural activities effect among these clusters. Finally, make a comparison of relationship structure among different character clusters that the results can offer to universities for strategy planning of cultural activities.

When processing analyses under different factors, we compare groups

with personal character. This study addresses hypotheses as follows:

H12: There is a significant relationship between students with different personal character and information contact.

H13: There is a significant relationship between students with different personal character and the feelings that are evoked by activity information.

H14: There is a significant relationship between students with different personal character and the evaluation of activity information.

H15: There is a significant relationship between students with different personal character and the belief of activities.

H16: There is a significant relationship between students with different personal character and activity attitudes.

H17: There is a significant relationship between students with different personal character and the desire of participating in activities.

H18: There is a significant relationship between students with different personal character and the action of actually attending activities.

H19: There is a significant relationship between students with different personal character and the effect evaluation of activities after participation.

To sum up the conclusions from the literature we have discussed, information contact produces emotional responses, beliefs, and evaluations. These emotional responses, beliefs, and evaluations cause the formation of information or activity attitudes. These attitudes evoke the desires or action of participation or using a product. Although the above concept is commonly used in marketing, it is seldom used in non-profit businesses. It has especially never been used in discovering the effects on campus cultural activities. This study integrates the above concepts as the basis of theories to build a relative model that is suitable for campus cultural activities. We applied this model to cultural activities held in Taiwanese universities to find out the applied effect using the concept structure. We attempted to discern how the feelings, beliefs, attitudes and behaviors of students are influenced by

information about campus cultural activities.

This study not only builds a relative model between the factors and results that influence campus cultural activities, it is also to discover if personal character influences the effects of campus cultural activities under interfering variances. By doing that, we hope to distinguish the difference between groups with different character and the actions of attending activities to use the result as a reference for planning activities in the future.

### 3 The Design of the Study

#### 3.1. The study structure

From the previously mentioned literature, we can see that there is an interactive relationship among the changeable variances of feelings that are evoked by information contact, and evaluation of information, activity belief, and activity attitude. Information contact will evoke emotional responses to information, and then information evaluation will be formed. Information contact will also evoke activity belief and then help to form attitudes. *Attitude* is the variance among feelings, evaluation, belief and the desire and action of participating in activities. Therefore, this study focuses on students' information contact, emotional responses, and belief to cultural activities to understand the influence of their information evaluation and attitudes, and then continues to study the influences of information evaluation and attitude to desire and action of participating activities and activity effect. It also uses groups with different personal character to discover the differences. Figure 1 shows the structure of this study.

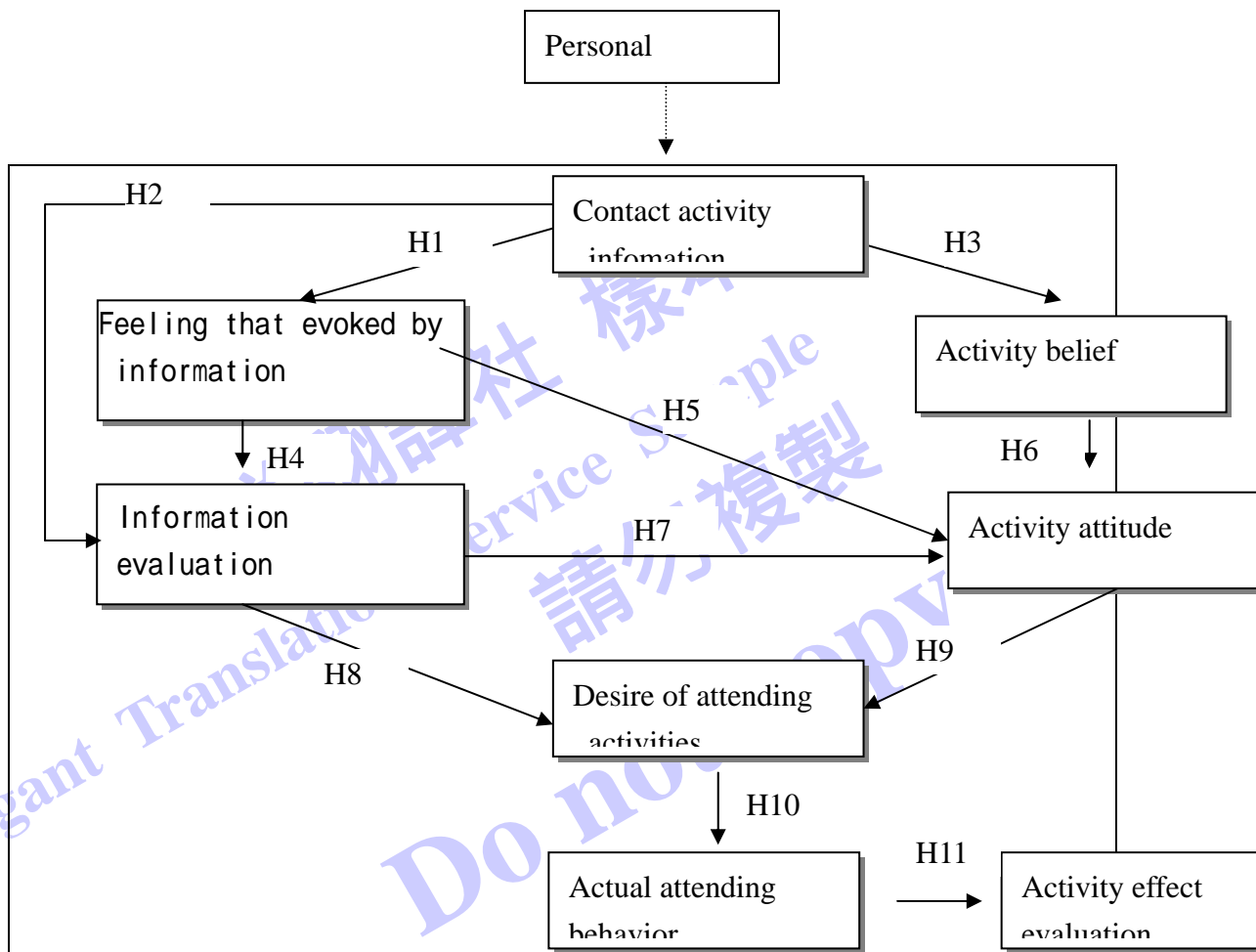


Fig. 1: Structure of the study

### 3.2. Designing the questionnaire

This study not only uses theories and literature as the basis to design questionnaires, it also uses a focus group interview method to interview eight university students and to collect relative information which becomes the reference in designing the questionnaire. After designing the questionnaire, we use it to collect some basic information to understand the situation and students' attitudes to attending university cultural activities. The content of the questionnaire is: the situation of the activity information contact, activity belief, feelings evoked by information, information evaluation, activity attitude, desire of participation in activities, the actual attendance and situation, and the evaluation of activity effect; the changeable factor is the personal character

of the students. All of the above items are shown in a table using scores from one to seven. Also, students' experience in attending activities and their basic profile will be measured using a classification measure.

### 3.3. Sampling

Since universities in Taiwan have different ways to promote cultural activities, and the contents of these activities are significantly different, we only included three universities in this study. They have all been holding cultural activities which share similarities successively in the last two years. The students who participated in the sampling survey were chosen randomly.

This study uses three universities as sampling targets. We chose three hundred students from each university, and then gave out the questionnaires to students separately. We got 788 questionnaires back. After removing the invalid ones, we left with 750 valid questionnaires.

### 3.4. Reliability and Validity Analysis

After the formal investigation, we used Cronbach's reliability coefficient evaluation chart to analyze the reliability and validity of these 750 valid questionnaires. According to Nunnally (1978), if Cronbach's  $\alpha$  value is bigger than 0.7, then it should be considered to possess a high validity; however, if it is lower than 0.35, the coefficient should be deleted. We used Nunnally's principal to judge whether the questionnaires are valid. The results show that besides information contact, validity coefficient of all factors are acceptable (greater than 0.35), and the reliability are all greater than 0.7, which means the measurement of all factors have consistency. (Shown in table 1) we also used factor analysis and correlation analysis to gauge the validity of the measurement. Through the factor analysis and calculating the item-to-total correlation coefficient, we knew that the coefficients under each factor could all be classified to one factor which means that there is only one factor that causes the characteristic value greater than one. The variance of each factor loading in each factor dimension is

greater than 0.6. The cumulative percent of variance is greater than 60%. The item-to-total correlation coefficient in each category is greater than 0.6. The statistic from above tells us that the questionnaires possess convergent validity.

## 4. Study Result

### 4.1. Personal Character Segmentation

This study is the first to use *personal character* as a topic to process its factor analysis in order to learn its factor dimension. We used the principal component factor analysis to extract the factor dimension within the 19 personal character questions and kept the four factors whose eigenvalue were greater than one. The cumulative percent of variance is 59.23%. Through varimax rotation to derive categories whose factor loading absolute value are bigger than 0.4 from each factor (Kaiser, 1958), we can explain the extract factors and name them. They are: outgoing and optimistic, serious and responsible, introverted and traditional, and looking for new information (curious). The validity of Cronbach's  $\alpha$  coefficient of each factor dimension is larger than 0.7 which shows that each factor is valid and reliable. (Guieford, 1965) The result is shown in Table 2.

Second, we used the factor score of the four personal character factor dimensions from factor analysis as the basis to process cluster analysis. We used k-mean cluster analysis method. (Afifi and Clark, 1990) After running the analysis several times, we discovered that dividing the interviewees as three clusters would get the most diversity. Consequently, we divided the interviewees into three clusters containing 293, 235, and 222 students. Moreover, in order to understand if the effect of cluster analysis is stable, this study ran a differentiation analysis on the three clusters according to the four personal characters to find out if each factor has noticeable differentiation among each cluster. The results are shown in Table 3 which tells us that three clusters have significant differences in each factor dimension. We can see that the effect of dividing the clusters is excellent.

Last, in order to further ensure the stability of all clusters, we ran a discriminant analysis on all samples from the three clusters and

their factors of the personal character factor dimensions. We got two discriminant functions. From Wilks' lambda's examination and the  $\chi^2$  value, we can see that the discriminant functions are much higher than the discriminant value. ( $p < 0.05$ ) Plus, we did a functional-cross analysis on all samples according to their discriminant functions, and we got a 98% accuracy rate. From the above results we can see that the effect of cluster analysis is very stable.

To conclude the previous analyses results, we deduce the meanings of each discriminant cluster and name them as follows:

Cluster one: It comes with the characteristic of serious and responsible, introvert and traditional, and looking for new information. We name it the *Introverted and Information Seeking Cluster*.

Cluster two: It comes with the characteristic of outgoing and optimistic. We name it the *Outgoing and Optimistic Cluster*.

Cluster three: It does not come with a special characteristic. We name it the *Non-Tendency Cluster*.

#### 4.2. The Relative Structure of Activity Effect among Each Personal Character

This study used AMOS software to establish relationship structures (See fig.2). Because of different cluster of personal character, this study conducted a research in three modeling.

The study strictly followed the scholars' suggestion that the most optimistic model must conform to the principle that the index of GFI, AGFI, NFI, IFI, CFI exceed 0.9; RMR lower 0.05; RMSEA lower 0.05 (Bentler, 1986; Chau, 1997; Bagozzi and Yi, 1988; Jöreskog, 1989; Bentler, 1990; Joreskog and Sorbom, 1982; Danes, 1984; Gefen et al., 2000). Moreover, it not only used chi-square ( $\chi^2$ ) as an index, but also chi-square test ( $\chi^2$ ) and degree of freedom (df) to measure. It also followed the suggestion proposed by Carmines and MacIver (1981) that the value of Chi-square/df ( $\chi^2/df$ )

should not larger than 3.

By following the above-mentioned principle to examine the fitness index of three models, the study obtained the following results:

#### *4.2.1. Model I: Introverted and Information Seeking Cluster*

The study shows that the fitness index of model I ( $\chi^2$ ) is 511.04; p value is 0.00;  $\chi^2/df$  value is 1.494 (under 3); RMR is 0.081; RMSEA value is 0.046 (tiny difference with 0.05); GFI is 0.877, AGFI is 0.832, NFI is 0.886 (near 0.9); IFI is 0.959, CFI is 0.958 (exceed over 0.9). In model I, there are significant relationship between the measured variances and the latent factors. The results show the relation structure of model I is acceptable (See table 4 and 5)

From the relation path analysis of model I, it discovers that:

Three relation paths - between information contact and information evaluation (H2), between the information emotional responses and information evaluation (H4), and between information evaluation and the activity attitude (H7) - don't have significant relation, other paths have significant and positive relationship. Especially, there is a strong relationship between information contact and information emotional responses, the coefficient of relationship is 0.980 ( $p < 0.01$ ). The result shows that the more messages informing, the more positive feeling. The result supports the hypothesis H1. Meanwhile, there is a positive relationship between information contact and activity belief. The coefficient of its relationship is 0.575 ( $p < 0.01$ ) that demonstrate the more message informing, the stronger belief is. This result stands for the hypothesis H3. The information emotional responses has a significant positive effect on activity attitude, and the coefficient of its relationship is 0.240 ( $p < 0.05$ ). This result stands for the hypothesis H5. The activity belief exists significant positive effect on activity attitude, and the coefficients of their relationships is 0.581 ( $p < 0.01$ ). This result stands for the hypothesis of H6. As both information evaluation



and activity attitude have significant positive effect on the desire of participating in activities, and the coefficient of their relationships are 0.688 and 0.330 ( $p < 0.01$ ,  $p < 0.05$ ), respectively. The results stand for the hypothesis of H8 and H9. Finally, the desire of participating in activities strongly affects the actual participating action, and the coefficient of the relationship is 0.717 ( $p < 0.01$ ). The result stands for the hypothesis H10. The actual participating action has a significant influence on the evaluation of activity effect, and the coefficient of its relationship is 0.293 ( $p < 0.01$ ). Therefore, the hypothesis H11 is valid.

The results indicate that the student of *Introverted and Information Seeking Cluster* has a positive feeling and belief due to the information contact; and the feeling and belief will indirectly affect the desire of participating in activities through the activity attitude. In sum, the higher desire of participating in activities is, the more actual participating action and better evaluation to activity effects are.

#### 4.2.2. Model II: Outgoing and Optimistic Cluster

The study shows that the fitness index of model II ( $\chi^2$ ) is 561.67; p value is 0.00;  $\chi^2/df$  value is 1.642 (under 3); RMR is 0.064; RMSEA value is 0.047 (tiny difference with 0.05), GFI is 0.890, AGFI is 0.851 (near 0.9), NFI is 0.906, IFI is 0.961, CFI is 0.961 (exceed over 0.9). In model II, there are significant relationship between the measured variances and the latent factors. The results show the relation structure of model II is acceptable (See table 4 and 5)

From the relation path analysis of model II, it discovers that:

Three relation paths – between information emotional responses and activity attitude (H5), between the information evaluation and activity attitude (H7), and between actual participating action and the evaluation of activity effect (H11) – don't have significant relationship; other paths have significant and positive relationship. Especially, there is

a significant relationship between information contact and information emotional responses, the coefficient of relationship is 0.531 ( $p < 0.01$ ). The result shows that the more messages informing, the more positive feeling. The result supports the hypothesis H1. Meanwhile, there is a positive relationship between the information contact and the information evaluation. The coefficient of its relationship is 0.208 ( $p < 0.05$ ) that demonstrate the more message informing, the positive information evaluation is. This result stands for the hypothesis H2. There is a strong relationship between the information contact and the activity belief. The coefficient of its relationship is 0.937 ( $p < 0.01$ ) that demonstrate the more message informing, the positive beliefs is. This result stands for the hypothesis H3. The information emotional responses has a significant positive effect on the information evaluation, and the coefficient of its relationship is 0.606 ( $p < 0.01$ ). This result stands for the hypothesis H4. However, the information emotional responses has not a significant effect on the activity attitude, the coefficient of its relationship is -0.055 ( $p > 0.05$ ). This result can not support hypothesis H5. The activity belief exists significant positive effect on activity attitude, and the coefficients of their relationships is 0.746 ( $p < 0.01$ ). This result stands for the hypothesis of H6. As both information evaluation, and the activity attitude have significant positive effect on the actual participating action, and the coefficient of their relationships are 0.551 and 0.338 ( $p < 0.01$ ,  $p < 0.05$ ), respectively. The results stand for the hypothesis of H8 and H9. The desire of participating in activities strongly affects the actual participating action, and the coefficient of the relationship is 0.873 ( $p < 0.01$ ). The result stands for the hypothesis H10. Finally, the actual participating action has not a significant influence on the evaluation of activity effect, and the coefficient of its relationship is 0.078 ( $p > 0.05$ ). Therefore, the hypothesis H11 is not valid.

The results indicate that the information contact can influence on students' information emotional responses, information evaluation, and activity belief, on student of *Outgoing and Optimistic Cluster*; and the information emotional responses, information evaluation and activity belief will indirectly affect the desire of participating in activities through the activity attitude. In sum, the higher desire of participating in activities is; the more actual participating action, but not influence on the evaluation of activity effect.

#### 4.2.3. Model III: Non-Tendency Cluster

The study shows that the fitness index of model II ( $\chi^2$ ) is 592.73; p value is 0.00;  $\chi^2/df$  value is 1.733(under 3); RMR is 0.068; RMSEA value is 0.058(tiny difference with 0.05), GFI is 0.847, AGFI is 0.792, NFI is 0.876 (near 0.9); IFI is 0.944, CFI is 0.943 (exceed over 0.9). In model III, there are significant relationship between the measured variances and the latent factors. The results show the relation structure of model III is acceptable (See table 4 and 5)

From the relation path analysis of model III, it discovery that:

Two relation paths - between information emotional responses and activity attitude (H5) and between the information evaluation and the activity attitude (H7) don't have significant relationship; other paths have significant and positive relationship. Especially, there is a significant relationship between information contact and information emotional responses, the coefficient of relationship is 0.742 ( $p < 0.01$ ). The result shows that the more messages informing, the more positive feeling. The result supports the hypothesis H1. Meanwhile, there is a positive relationship between the information contact and the information evaluation. The coefficient of its relationship is 0.517 ( $p < 0.01$ ) that demonstrate the more message informing, the positive information evaluation is. This result stands for the hypothesis H2. There is a strong

relationship between the information contact and the activity belief. The coefficient of its relationship is 0.911 ( $p < 0.01$ ) that demonstrate the more message informing, the more positive beliefs is. This result stands for the hypothesis H3.

Second, the information emotional responses has a significantly positive effect on the information evaluation, and the coefficient of its relationship is 0.456 ( $p < 0.01$ ). This result stands for the hypothesis H4. However, the information emotional responses does not have a significant effect on the activity attitude, the coefficient of its relationship is 0.120 ( $p > 0.05$ ). This result can not support hypothesis H5.

Third, the activity belief exists significant positive effect on activity attitude, and the coefficients of their relationships is 0.707 ( $p < 0.01$ ). This result stands for the hypothesis of H6. As both information evaluation and the activity attitude have significant positive effect on the desire of participating in activities, and the coefficient of their relationships are 0.438 and 0.494 ( $p < 0.05$ ), respectively. The results stand for the hypothesis of H8 and H9. The desire of participating in activities strongly affects the actual participating action, and the coefficient of the relationship is 0.866 ( $p < 0.01$ ). The result stands for the hypothesis H10. Finally, the actual participating action has a significant influence on the evaluation of activity effect, and the coefficient of its relationship is 0.53 ( $p < 0.01$ ). Therefore, the hypothesis H11 is valid.

The results indicate that the information contact can influence the students' information emotional responses, information evaluation, and activity belief, on student of *Non-Tendency Cluster*; and the information emotional responses will impact on information evaluation and will indirectly affect the desire of participating in activities through the activity attitude. While, activity belief will directly affect the activity attitude then impact on the desire of participating in activities. In sum,

the higher the desire of participating in activities is; the more actual participating action and influence on the evaluation of activity effect.

#### 4.3. Difference Analysis

In order to understand the difference in activity efficiency among the students of different clusters, this study utilized the multiple analysis of variance (MANOVA) and analysis of variance (ANOVA) to conduct the difference analysis among different clusters. The results demonstrated that all aspects presented significant difference among these three clusters (See table 6).

Table 6 showed that all averages except the average of information contact were below 4, the other aspect's averages are near or above 4 for the three clusters. That means the three clusters of students have positive emotional responses, information evaluation, activity belief, activity attitude and the desire of participating activities toward cultural and artistic activities. This leads to actual participation and positive effect evaluation. However, the different clusters have significant differences on eight aspects.

The results of difference analysis noticed that focus on the aspect of information contact, the students of Outgoing and Optimistic Cluster are the ones who are exposed to the message the most, and who are most familiar with the message. As to the emotional responses aspect, the students in the Introverted and Information Seeking Cluster most agree that the messages of campus cultural and artistic activities are attractive, interesting, and contain impressive visual effects that induce enthusiastic discussion. As to the activity attitude aspect, the students of Introverted and Information Seeking Cluster most regard the campus cultural and artistic activities as student welfares, and that has relieve

effect and can change a person's temperance. As to the activity attitude aspect, the students of Introverted and Information Seeking Cluster and Outgoing and Optimistic Cluster both agree that the campus cultural and artistic activities are important, positive and valuable. Therefore, they like to receive the relevant information. As to the desire of participating activities aspect, the students of Introverted and Information Seeking Cluster most like cultural activities after reading the message. As to the actual participating action, the students of Outgoing and Optimistic Cluster are the one who actually attend campus cultural and artistic activities most, and they also invite their friends to join together. They are willing to join these kinds of activities in the future. As to the evaluation of activity effect, the students of Introverted and Information Seeking Cluster believe that participate these activities can improve the evaluation of activities and school most.

From the above-mentioned information, this study proposed the following results:

A significant difference in the information contact exists among the students of different clusters (H12 supported).

A significant difference in information emotional responses exists among the students of different clusters (H13 supported).

A significant difference in information evaluation among the students of different clusters (H14 supported).

A significant difference in the activity belief exists among the students of different clusters (H15 supported).

A significant difference in activity attitude exists among the students of different clusters (H16 supported).

A significant difference in the desire of participating activities

exists among the students of different clusters (H17 supported).

A significant difference in actual participating action exists among the students of different clusters (H18 supported).

A significant difference in evaluation of activity effect after participation exists among the students of different clusters (H19 supported).

## 5. Conclusion and Advice

### 5.1. Conclusion and Discussion

This study uses non-profit organizations, *universities*, as its research topic. We study the target consumers, *university students*, within the non-profit organizations. The study sees campus cultural activities as products or services that non-profit organizations provide; students' different personal characters as segmentation variance to define three clusters with different characteristics. According to the conditions, we then investigate the different contacts, feelings, evaluations and attitudes that students with various personal characters have to campus cultural activities, to measure the effect of these activities. In addition, we compare and analyze the differences on the relative structure of activity effect that student groups with various personal characters have to develop an index to evaluate the effect of campus cultural activities and a model of relative structure. Although the aim of non-profit organizations, *universities*, is not to make profit, they should process a test to evaluate the activities they hold on campus to better understand the effects of the activities and their influential factors and to use them as a reference for planning activities in the future.

This study uses eight measuring factors to develop an index on the effect evaluation of campus cultural activities. These eight factors are: the situation of activity information contact, feelings evoked by activity information, activity evaluation, activity belief, activity attitude, and desire of participating activities, actual participating action, and evaluation of activity effect. We also use students'

personal traits and lifestyles to measure their personal character. The result shows that according to students' personal character, we can divide them into three clusters with different characteristics. They are the Introverted and Information Seeking Cluster, the Outgoing and Optimistic Cluster, and the Non-Tendency Cluster. With the three clusters, the average means of the seven measurement factors are larger than 4, except on the Information Contact. This means that all clusters show a positive attitude towards campus cultural activities. Clusters which share different characteristic show different intensity on each measurement factors. It means that three clusters show a significant differentiation on the eight factors of the effect evaluation of campus cultural activities. This also tells us that personal characteristics do affect information communication and activity effect. This result corresponds to the theses of many other scholars. [20; 35; 36; 43; 62; 67] The result analyses of this study are as follows:

1. Students in the Introverted and information seeking cluster would like to get in touch with activity information and they tend to have stronger emotional responses. They are especially attracted by campus cultural activities and usually are interested in them. They also have stronger visual impressions. This shows that students in this cluster are more likely to be influenced by information and information leaves a deeper impression on them; therefore, the stimulation of information content evokes a better response within this cluster. Students in this cluster have higher evaluation to information, and they think activity information has communication effect and activity advertisement is a good marketing tool. As for activity belief, they agree that campus cultural activities help raise students' level and release their pressure. Their attitude towards campus cultural activities is strong and positive. They look upon these activities and think the activities are valuable. These students have the highest desire to participate in activities. They would voluntarily look for activity information, and have the desire to go to these activities. However, the actual participating action that they have is less than the Outgoing and Optimistic Cluster and their evaluation on activity effect is higher than the Outgoing and Optimistic Cluster. To conclude the points above, this cluster favors campus cultural activities the most and they have the most positive attitude. Although they have high



desire to participate activities, their shyness might lead to a lower actual participating action than the Outgoing and Optimistic Cluster.

If we look at this from the aspect of the relative structure of information communication and activity effect, information contact is what mainly evokes the positive emotional responses and belief, and positive emotional responses and beliefs lead them to create a positive attitude, even increasing the desire and the action of participating. This ultimately leads to a positive effect evaluation. From this structure, we can see that: information contact→ emotional responses to activity belief→ activity attitude → desire of participating→ action of participating→ effect evaluation is the main relative path of this cluster. In this path, all factors show a positive casual relationship among each other, especially between information contact and emotional responses. Their relationship is the closest. It means this cluster is considerably influenced by activity information, so the activity information design and exposition frequency is the second important requirement of being successful. Activity organizers should use striking information and communication tools to increase the exposition and make students in this cluster aware of the information to further initiate their participation.

2. Outgoing and optimistic students also like to get in touch with activity information. Their emotional responses are not as great as the introverted and information seeking students, but still quite positive and strong. Their evaluation to activity information is considerably high. As for their activity belief, they think holding activities is beneficial for students, and they also have a pretty positive activity attitude. They think holding activities is an important and positive thing for universities to do, plus it will correct certain negative trends found on campus. They think it is a highly valuable thing to do. With a lower desire of participating in activities than the introverted and information seeking cluster, this cluster still has a high desire to participate. The participating action is higher than the introverted and information seeking cluster; however, the activity evaluation is lower,

but still considerably high. This tells us that the outgoing and optimistic cluster is fond of activities and is the main participant.

If we look at this from the aspect of the relative structure of information communication and activity effect, information contact strongly affects the student's activity belief which is the key to influencing attitudes. On the other hand, information contact evokes positive emotional responses, which leads to positive information evaluation and causes the desire of participating and the actual participation. However, there is no evident relation between actual participation and effect evaluation. A relation might exist between the evaluation of activity effect and activity content; therefore, it could be a topic worth study. From the relative structure we can see that there are two important paths to influence the effect which would increase students' desire and action of participating. These two paths show a positive relative structure between each other. One of them is: information contact→ activity belief→ activity attitude→ desire of participating→ action of participating; the other one is: information contact→ emotional responses→ information evaluation→ desire of participating→ action of participating. The results tell us that the outgoing and optimistic cluster has more various paths to communication effects. Students' desire of participating in activities can be evoked by different paths. However, information contact is still the main cause for the emotional responses and belief development. Thus, how to strengthen the contact and stimulation of activity information is another key point.

3. Non-Tendency Cluster has the least amount of students who get in touch with information. The average means of the seven measurement factors are the lowest among the three clusters. Although its average means are a little higher than the average score (score 4) on the factors of information evaluation, activity belief, activity attitude, actual participating action, the evaluation of activity effect, the average means of information contact, emotional responses, and desire of

participating are all lower than 4. This tells us that this cluster is not attracted by activities and is not willing to participate. Students in this cluster do not seem to care about the outside world and they have no desire to participate in any activities.

If we look at this from the aspect of the relative structure of information communication and activity effect, information contact directly affect students' emotional responses, information evaluation, and their activity belief. Their activity belief affects their activity attitude, the desire and action of participating in activities. In addition, their emotional responses affect their information evaluation, and the desire and action of participating in activities. However, the evaluation of activity effect after participating and the action of participating produce a positive and noticeable relationship.

From the relative structure, we can see that there are two important paths. One of them is: information contact→ emotional responses, information evaluation→ desire of participating→ action of participating→ effect evaluation; the other one is: information contact→ activity belief→ activity attitude→ desire of participating→ action of participating→ effect evaluation. Each factor in these two paths shows a positive causal relationship. In the causal relationship, information contact and activity belief have the closest relationship, and activity belief and activity attitude have the second closest relationship. Consequently, although the desire of participating in this cluster is low, students in this cluster are still influenced by information contact, and the influential paths are even wider. The effect evaluation after participating affects the actual participating action the most. This cluster will not care or pay attention to activity information voluntarily, and they are not likely to participate in activities. However, if they do participate in activities it will lead to a positive effect evaluation. Using a fairly large amount of information stimulation to increase the opportunities for them to participate in activities and the positive effect after participating to trigger their desire of participating in activities should be the proper strategy for students in the Non-Tendency Cluster.

Plus, using information stimulation to lead to the action of participating, will also get a considerable effect.

## 5.2. Study Limitation and Suggestions

This study uses personal character as a segmentation variance to divide students. It focuses on non-profit organizations, *universities*, to process a study on evaluating the effect of the communication from campus cultural activities. We have verified the differentiation of segmentation among students with different personal characters. Although we have a concrete result, there are still some improvements to be made.

We chose three universities that hold similar cultural activities as the study samples, and university students are our investigation targets which were chosen in order to reduce interference from other factors and discover the influence of personal characters. However, in addition to personal character there are still some interfering factors which influence cultural activities, for example, student's gender, major, etc. This is only one of the implementations of this study. The following study on this topic could mainly focus on students' backgrounds and strive to understand more on the main differentiation or interference sources.

Second, this study used convenient sampling methods to derive its samples and this could cause some sampling errors. This could also lead to a false result in the study. In the future, using probability sampling method might reduce errors.

From the above study results we can see that students with different personal character have significantly different attitudes and responses towards campus cultural and artistic activities. Beside the factor of personal character, it could also be because of the contents of the activities vary from one university to another; or the different ways of revealing activity information. This could be another study subject. Thus,

the following study could limit itself to a more valid sampling arrangement, such as using the students in one university to control the interfering factor in order to feature the main influential intensity of the study variance. Or, use the content of activities as a categorizing foundation and a sampling basis to analyze the effect differentiation on different activity types. This will help the study to show a more concrete and correct result on activity effects. These are some important directions for the future study on this topic. This study has proven that personal character is the most important interfering factor on activity effects; therefore, non-profit organizations, like *universities*, should be market oriented before planning cultural activities and try to understand students' personal characters. This will help universities to plan and develop a more appropriate way of information communication and activities so that to meet the expect effect when holding activities.

Table one: The Examination of Reliability and Validity

	Item	Item-to-total correlation	Factor Loading	Eigenvalue	Cumulative Percent of Variance %	Cronbach $\alpha$ Value
Information contact	● Aware of activity information (A1)	.637	.821	1.347	67.336	.4758
	● Often get in touch with information (A3)	.673	.821			
Emotional responses evoked by information	● Is attractive (B1)	.7683	.862	3.571	71.425	.8996
	● Is interesting (B2)	.7752	.866			
	● Will cause an ablaze discussion (B3)	.7428	.840			
	● Is fascinating (B4)	.7819	.864			
	● Has a profound visual effect (B5)	.6821	.791			

Information value	<ul style="list-style-type: none"> <li>● Is joyful (C1)</li> <li>● Is alive (C2)</li> <li>● Has a information communication effect (C3)</li> <li>● Is a promotion tool (C4)</li> <li>● Has a cultural spirit (C5)</li> </ul>	.7218 .7353 .7608 .6631 .6589	.832 .840 .856 .785 .781	3.357	67.133	.8772
Activity belief	<ul style="list-style-type: none"> <li>● Is a symbol of promoting quality (D1)</li> <li>● Has the effect of influence unobtrusively and imperceptibly (D2)</li> <li>● Is something that can develop one' s spirit (D3)</li> <li>● Is relaxing and can release pressure (D4)</li> <li>● Is beneficial to students(D5)</li> </ul>	.7476 .7465 .7632 .7231 .6561	.850 .849 .860 .822 .772	3.456	69.123	.8879
Activity attitude	<ul style="list-style-type: none"> <li>● Campus cultural activities are important. (E1)</li> <li>● Campus cultural activities are positive. (E2)</li> <li>● Campus cultural activities correct negative trends on campus (E3)</li> <li>● I like to have campus cultural activity information. (E4)</li> </ul>	.7985 .8080 .7412 .6580 .7353	.885 .889 .841 .771 .830	3.563	71.260	.8984

	<ul style="list-style-type: none"> <li>● Overall, I think Campus cultural activities are valuable. (E5)</li> </ul>					
Desire of participating activities	<ul style="list-style-type: none"> <li>● I collect campus cultural activity information if they are interesting. (F1)</li> <li>● After reading the advertisement, I should like cultural activities more. (F2)</li> <li>● After reading the advertisement, I would have the desire to participate activity. (F3)</li> </ul>	.6495 .7477 .6901	.839 .897 .868	2.261	75.380	.8363
Actual action of participating	<ul style="list-style-type: none"> <li>● I have participated campus cultural activities. (F4)</li> <li>● I will invite friends to go to campus cultural activities. (F5)</li> <li>● I will continue participating same kind of campus cultural activities. (F6)</li> </ul>	.7509 .7691 .7142	.892 .901 .871	2.365	78.843	.8657

Evaluation of activity effect	<ul style="list-style-type: none"> <li>After participating activities, I have higher evaluation to the university. (F7)</li> </ul>	.6374	.905	1.637	81.871	.7786
	<ul style="list-style-type: none"> <li>Holding activities on campus will pull students together. (F8)</li> </ul>	.6374	.905			

Table two. Personal Character Factor Analysis

Factor Dimension	Item	Factor Loading	Eigenvalue	Cumulative Percent of Variance %	Cronbach $\alpha$ Value
Outgoing and optimistic	<ul style="list-style-type: none"> <li>I can control my emotion</li> </ul>	.748	6.811	35.845	.8452
	<ul style="list-style-type: none"> <li>I like to seek new information and things</li> </ul>	.701			
	<ul style="list-style-type: none"> <li>I like social activities.</li> </ul>	.648			
	<ul style="list-style-type: none"> <li>I am always optimistic.</li> </ul>	.628			
	<ul style="list-style-type: none"> <li>I am a people person.</li> </ul>	.581			
	<ul style="list-style-type: none"> <li>I always try my best to do a good job.</li> </ul>	.544			
	<ul style="list-style-type: none"> <li>I usually smile and I am friendly.</li> </ul>	.463			
Serious and responsible	<ul style="list-style-type: none"> <li>I am a cautious.</li> </ul>	.762	2.390	48.421	.7898
	<ul style="list-style-type: none"> <li>I am responsible.</li> </ul>	.678			
	<ul style="list-style-type: none"> <li>I am down to earth.</li> </ul>	.670			
	<ul style="list-style-type: none"> <li>I am not a temperamental person.</li> </ul>	.492			
Introvert and traditional	<ul style="list-style-type: none"> <li>I lie to be alone.</li> </ul>	.708	1.053	53.965	.7282
	<ul style="list-style-type: none"> <li>In my free time, I like to stay at home.</li> </ul>	.687			
	<ul style="list-style-type: none"> <li>I am shy and introvert.</li> </ul>	.650			
	<ul style="list-style-type: none"> <li>I am often calm.</li> </ul>	.633			
	<ul style="list-style-type: none"> <li>I am a traditional person.</li> </ul>	.560			
Information seeker	<ul style="list-style-type: none"> <li>I catch up with the latest information.</li> </ul>	.846	1.001	59.234	.7691
	<ul style="list-style-type: none"> <li>I am up-to-date.</li> </ul>	.735			
	<ul style="list-style-type: none"> <li>I am good at learning new information</li> </ul>	.512			



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