

## Understanding Volunteers' Motivations and Their Satisfactions: A Case Study of Forest Interpreters in Chungbuk Province

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**Abstract :** Volunteerism is an emerging issue in public resource management such as forest recreation management. As volunteers, forest interpreters play a significant role in supporting and educating visitors to forest recreation areas. The purpose of this study was to examine forest interpreters' motivation and their job satisfaction. To collect data, a set of self-administered questionnaire was sent to 250 members of Chungbuk Forest Interpreters' Association during August and September of 2005. 152 completed questionnaires were returned. Principal component factor analyses yield five motivation factors and four satisfaction factors. All the factors were highly correlated.

**Key words :** factor analysis, forest interpretation, motivation, satisfaction

### Introduction

The last several years have brought significant changes in the forest management in Korea. Among the changes, there has been a growing recognition that forests should be managed for cultural values such as recreation and education, as well material and environmental values. As a result of the growing recognition in cultural values of forests, 'Forest Culture and Recreation Law' was proclaimed in August of 2005. In the law, forest interpreters are prescribed as volunteers in forest recreational areas such as recreational forests and arboretums, etc.

Volunteering is an activity that is undertaken by an individual for no financial reward and benefits someone other than the person who volunteer (Papadkis, *et al.*, 2004). People have been involving in volunteer programs that they consider to be personally satisfying as well as beneficial to their communities.

Volunteers in forestry fields, in addition to their contribution to the social welfare, are considered an essential human resources. Consequently in the United States, for the total dollar value of volunteer time was \$15.40 per hour in 2000 (Independent Sector, 2001). Thus, volunteers' contribution, in terms of their involving time, may be considered as a valuable asset.

Because volunteers are essential human resource, the values and attitudes of volunteers toward their jobs are a vitally important concern for policy decision-makers and

managers in forest recreation. 'Why the volunteers involve their activities?' 'What kinds of benefits or satisfactions obtained from their volunteering activities?' These questions are may considered as basic and simple, but rather important to implement policies and practices in forest recreation.

As volunteers, forest interpreters are playing important roles in forest recreation resource conservation and management. Through forest interpretative programs, they provide knowledge about ecological, cultural and historical values of the regions and forest ecosystems to interpretative program participants. In addition, they stimulate participants to recognize intangible values of forests and to change participants' behaviors to use forest resources appropriately. Therefore, forest interpretation program is considered as one of the efficient indirect management alternatives.

The overall purpose of this study was to learn more about forest interpreters as volunteer (eg., who they are, what specific motives and satisfaction have induced them to contribute their times and efforts to forest interpretation activities). Specifically, the purpose of this study was to identify the dimensions of forest interpreters' motivations and their satisfactions from their interpretation activities. This study also investigated the relationships among factors of the two research variables (i.e., motivations and satisfactions).

### Literature Review

#### 1. Volunteers' motivation

Motivation of volunteers is attribute to factors such as

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the increasing number of nonprofit organizations, decreasing pool of volunteers, competition for volunteer recruitment among organizations, and problems in volunteers' retention to an organization (Papadakis, 2004). Based on the themes identified in the newsletters from several restoration groups in Illinois, Schroeder (2000) reported wide dimensions of volunteers motivation in ecosystem restoration activities such as the purpose of the volunteers' work, the current state of nature, metaphors of invasion and war, making a difference, personal rewards of restoration, social dimensions of restoration, volunteers as people, feelings toward nature, and sources of ideas and inspiration. He argued that high level of motivation and enthusiasm of volunteers in ecosystem restoration activities stems from three interacting factors. These were (1) the sense of urgency and immediacy they feel about the fragility of nature and the impeding loss of native sites and species, (2) their belief that they can make an important and difference in preventing this loss, and (3) the ability to see tangible progress from their efforts in a fairly short time span.

Joining membership to non-profit organizations and doing volunteer activities have been the traditional ways of being volunteers. Survey with members of the North Carolina Zoological Society, Caldwell and Andereck (1994) found purposive and solidarity benefits were most important motivations for volunteer activities in zoo. On the other hand, Manzo and Weinstein (1987) found that active members of the Sierra Club were motivated by a desire to make the world a better place, perceptions of the efficacy of citizen action, feelings of having been personally harmed by environmental problems, and friendships with other members.

Grese, *et al.* (2000) also found four factors that motivated volunteer in ecosystem steward. These were helping the environment, exploration, spirituality, and personal and social factors.

The literature review on volunteers' motivation in forestry and environment restoration areas indicated that there have been a very few studies performed to date. It was also indicated that conclusions of the previous studies paralleled, at least in general terms, the findings of other studies of volunteers and their motivations. It could be also argued that people had more than one reasons for volunteering relating to concerns to others (altruistic motivation) and for themselves (egoistic motivation).

## 2. Volunteers' satisfaction

Job satisfaction is a key factor in the retention of volunteers, as well as in the ultimate success and stability of forest recreation programs (Silverberg *et al.*, 2001). Van Til (1988) described five characteristics of volunteer's satisfaction: (1) people volunteer to satisfy personal and

social goals and needs, (2) the individuals who volunteer typically do so after carefully weighing alternatives, (3) the realm of voluntary actions is complex and multifaceted in which different organizational tasks appeal to different motivational forces, (4) helping for others, and (5) the satisfaction to give is shaped by boarder social and realities (eg., to make the world a better place). Successful volunteer programs engage volunteers with tasks that are meaningful and contribute to the effectiveness and success of the program (Martinez and McMullin, 2004). Therefore, forest recreation managers should consider the dimensions of satisfaction from volunteers' activities, because examining volunteer satisfaction can give managers a sense of whether or not the needs of the volunteers are being met.

The functional approach to volunteering (Clary *et al.*, 1998) suggested that people may be attempting to satisfy a value function, whereby they participate in volunteer work to express and act on values important to the self. More generally, Cantor (1994) argued that job setting interacts with psychological function to determine job satisfaction of volunteers. Consistent with this perspective, the level of satisfaction with a person's volunteer experience is positively correlated with the person receiving functionally relevant benefits (Clary *et al.*, 1998).

A study by Silverberg *et al.* (2001) with public parks and recreation volunteers in Arizona, U.S.A. confirmed the functionalist's argument. They developed a scale to measure volunteers' job satisfaction in outdoor recreation settings. The scale items addresses five satisfaction dimensions such as nature of the work, contingent rewards, operating procedures, coworkers and communications. They reported that volunteer satisfaction was a function of both job setting and psychological functions met by volunteering. The result of their study suggested that matching job setting and individuals' reasons for volunteering can help increase satisfaction among parks and recreation volunteers.

## Methods

### 1. Participants

The population for this study consisted of members of Chungbuk Forest Interpreters' Association. There were 152 respondents in this study: 53% males and 47% females. Respondents ranged in age from 24 to 72 years with a mean age of slightly over 48 years. Most of the respondents were high school (35%) or university (43%) graduates. Majority (86%) of the respondents joined the Association within one or two years.

### 2. Instruments

A set of self-administered questionnaires including

forest interpreters' motivation and satisfaction scales were developed for this study. Items in the motivation scale were derived from Schroeder's volunteers' motive study (2000), and modified for this study. The motivation scale asked respondents 18 reasons for volunteering in forest interpretation activities. Respondents were asked to rate each reason from 1 to 5, respectively, as not important, slightly important, moderately important, very important, and extremely important.

To measure forest interpreters' job satisfaction, a 23-item volunteer satisfaction scale developed by Silberberg *et al.* (2001) was modified for this study. Silberberg *et al.*'s (2001) scale was considered to be appropriate because it is consistent with the functionalist approach which emphasizing internal rewards of volunteering. The scale was modified to 16 items to measure forest interpreters' job satisfaction. The 7 items removed from the scale were disregarded due to their inappropriate relation to forest interpretation. Like the motivation scale, respondents were asked to rate each item from 1 to 5, from not important to extremely important.

### 3. Data collection

A self-administered questionnaire was mail to each of the 250 members of the Chungbuk Forest Interpreters'

Association during August and September of 2005. Questionnaires were distributed based on Dillman (2000) mail-survey methodology. Initially, a survey, stamped self-addressed envelope, and cover letter describing the study's objectives were mailed out, followed by a remainder 10 days later. Two weeks after the remainder, another complete set of questionnaire materials was sent to all non-respondents. 152 completed questionnaires were returned and analyzed for this study. Therefore, response rate for this study was 61%.

### 4. Data analysis

Data were analyzed in three steps. First, descriptive statistics were obtained to characterize the forest interpreters. Secondly, to find the common factors that underlie the forest interpreters' motivation and job satisfaction, principal component analyses with varimax rotation was performed. Factors were retained if they had eigenvalues of 1.0 or greater, and individual items were considered to load on a factor if they had a value greater than 0.4. Thirdly, based on the results from the principal component analyses, factor scores were computed and these became the new dependent variables for the next stage. These were then entered into a correlation analysis to determine any correlations among the factors of forest

**Table 1. Factor loading of 18 motivation items.**

Motivation Item	Factors				
	1	2	3	4	5
To help conservation of forests	0.124	0.254	0.819*	0.233	0.006
To help managing forests	0.006	0.139	0.828*	0.111	0.173
To spend time for good purpose	0.258	0.276	0.414	0.223	0.686*
To learn new skills	0.467	0.144	0.195	0.818*	0.260
To learn new knowledge	0.276	0.430	0.138	0.903*	0.188
To do good work	0.348	0.487	0.296	0.491	0.751*
To challenge new thing	0.406	0.417	0.008	0.591*	0.590
To learn more about nature	0.186	0.777*	0.197	0.489	0.008
To teach children	0.430	0.198	0.230	0.005	0.690*
To get physical satisfaction	0.413	0.790*	0.007	0.152	0.482
To get peaceful mind	0.528	0.815*	0.005	0.320	0.418
To be with forest/nature	0.198	0.690*	0.388	0.173	0.222
To feel belonging	0.817*	0.359	0.103	0.257	0.388
To find self-identification	0.813*	0.389	0.007	0.415	0.397
To get leadership	0.839*	0.229	0.001	0.280	0.340
To teach others	0.845*	0.152	0.009	0.273	0.154
To meet new people	0.676*	0.295	0.103	0.147	0.428
To get together with friends	0.783*	0.286	0.006	0.232	0.266
Eigenvalues	6.666	2.105	1.384	1.195	1.024
% of variance	37.0	11.7	7.7	6.6	5.7

Note: factor1=social and self-identity; factor2=enjoying nature and getting peace; factor3=forest conservation; factor4=exploration; and factor5=contribution to good work

\*Items that have a high loading on a factor.

interpreters' motivation and their job satisfaction.

## Results

### 1. Forest interpreters' motivation

Respondents reported that the most important reasons for participating forest interpretation activities were “to be with forest/nature”, “to learn more about nature”, and “to help conservation of forests”. The respondents also rated highly items indicating “to help managing forests”, “to spend time for good purpose”, and “to learn new knowledge”. The above motivation items were rated as very important to extremely important by the respondents (means of  $\geq 4.0$  on the five-points rating scale).

Principal component factor analysis yield five factors with eigenvalues greater than 1. The factor loadings on the 18 items are presented in Table 1. Factor 1, comprising six items that represent “social and self-identity”, accounted for 37.0% of total variance. Factor 2 characterized “enjoying nature and getting peace”, with 11.7% of total variance. Factors 3, 4, and 5 consisted of items related to “forest conservation”, “exploration”, and “contribution to good work” respectively.

### 2. Forest interpreters' job satisfaction

The forest interpreters indicated that the most impor-

tant satisfactions from their interpretation activities were “people understand forest correctly”, “good way to spend time”, “getting pleasure”, and “getting stimulation”. In addition, “making positive life”, and “giving inner-self growth” satisfaction items were rated highly by the respondents. The above satisfaction items were rated as very important to extremely important by the respondents (means of  $\geq 4.0$  on the five-points rating scale).

Table 2 shows factor loadings of 16 satisfaction items. Four factors were derived from principal component factor analysis. There were seven items in factor 1, representing “personal enjoyment and toward nature”. Factor 1 included almost half of the total items accounting for 49.4% of total variance. Factor 2, titled “social and positive life” possessed three items accounting for 9.4% of total variance. Factor 3 and 4 characterized “personal rewards”, and “making a different”, consisted of four and two items with 7.4% and 6.9% of total variances respectively.

### 2. Relationships among forest interpreters' motivation and satisfaction factors

Table 3 presents the summary of correlation statistics concerning any relationships among forest interpreters' motivation and satisfaction factors. All outcome factors

**Table 2. Factor loading of 16 satisfaction items.**

Satisfaction Item	Factors			
	1	2	3	4
I am satisfying that people understand forest correctly by my forest interpretation	0.795*	0.492	0.413	0.312
I am satisfying with belief that the future of youth will be changed by my forest interpretation	0.503	0.266	0.274	0.798*
I am recognized by my forest interpretation activities	0.463	0.366	0.438	0.746*
I am proud of myself as a forest interpreter	0.677*	0.424	0.409	0.442
My forest interpretation activities help to protect forests	0.882*	0.382	0.387	0.284
Forests are managed appropriately by my forest interpretation activities	0.804*	0.430	0.386	0.367
My forest interpretation activities help to preserve forests for future generation	0.850*	0.424	0.443	0.320
My forest interpretation activities are good way to spend time	0.682*	0.637	0.548	0.126
My family member are proud of me as a forest interpreter	0.490	0.553	0.709*	0.316
Forest interpretation activities give me pleasure	0.769*	0.442	0.632	0.004
Forest interpretation activities give me stimulation	0.583	0.279	0.877*	0.006
Forest interpretation activities fulfill my intellectual curiosity	0.404	0.409	0.839*	0.185
I am satisfying with having opportunities to meet people who have same interests through forest interpretation activities	0.396	0.869*	0.418	0.141
My colleagues in forest interpretation are good friends	0.457	0.915*	0.356	0.126
Forest interpretation activities make me positive	0.430	0.822*	0.505	0.355
My inner-self is growing by forest interpretation activities	0.246	0.565	0.812*	0.351
eigenvalues	7.905	1.500	1.176	1.100
% of variance	49.4	9.4	7.4	6.9

Note: factor1=personal enjoyment and toward nature; factor2=social and positive life; factor3=personal rewards; factor4=making a different

\*Items that have a high loading on a factor.

**Table 3. Correlation between motivation and satisfaction factors.**

	Motivation Factor 1	Motivation Factor 2	Motivation Factor 3	Motivation Factor 4	Motivation Factor 5
Satisfaction Factor 1	0.403**	0.307**	0.552**	0.309**	0.431**
Satisfaction Factor 2	0.496**	0.380**	0.285**	0.383**	0.393**
Satisfaction Factor 3	0.454**	0.414**	0.343**	0.550**	0.579**
Satisfaction Factor 4	0.546**	0.314**	0.327**	0.313**	0.316**

Note: \*\* $p \leq 0.01$

Motivation factor1=social and self-identity; factor2=enjoying nature and getting peace; factor3=forest conservation; factor4=exploration; and factor5=contribution to good work

Satisfaction factor1=personal enjoyment and toward nature; factor2=social and positive life; factor3=personal rewards; factor4=making a different.

showed significant correlations between factors of two variables (Table 3;  $p \leq 0.01$ ).

Among them, the correlation between motivation factor 5, "contribution to good work" and satisfaction factor 3, "personal rewards" showed the highest coefficient (Pearson's  $r=0.579$ ), followed by motivation factor 3, "forest conservation" and satisfaction factor 1, "personal enjoyment and toward nature" ( $r=0.552$ ).

## Discussions

Volunteers' motivation and job satisfaction are key concern for managers of agencies relying upon volunteer workers (Silvergerg *et al.*, 2001), yet little research has performed in this areas. The purpose of this study was to examine forest interpreters' motivation and satisfaction, and to determine whether these two research variables were correlated each other. The results of this study can help those who manage and coordinate volunteers (i.e., forest interpreters) in forest recreation to understand why volunteers become committed to their activities and what are the perceived satisfaction from their volunteering activities.

The high levels of motivation and satisfaction from forest interpretation stem from several interacting factors. In terms of motivation, forest interpreters, as volunteers, indicated that "social and self-identity", "enjoying nature and getting peace", "forest conservation", "exploration", and "contribution to good work" were the main reasons to participate forest interpretation activities. On the other hand, "personal enjoyment and toward nature", "social and positive life", "personal rewards", and "making a different" were the main satisfaction factors from their activities. As expected, all factors between motivation and satisfaction were highly correlated.

These five motivation and four satisfaction factors combine to create a powerful incentive and reinforcement for interpreters' work. Therefore, managers of forest interpretative programs might help maintain the motivation and enthusiasm of their interpreters by high-

lighting the importance of their activities to better future environment, future generation, and making proud of themselves. By providing opportunities for learning knowledge about nature, enjoying outdoor, and social events into forest interpretation programs, managers or coordinators can help make the volunteering experience more engaging and rewarding.

The results of principal component factor analyses indicated there were several factors in motivation and satisfaction of the forest interpreters. These conclusions parallel the findings of the previous studies of volunteers and their values (Caldwell and Andereck, 1994; Manzo and Weinstein, 1987). In addition, the results of this and the previous studies support functionalist perspective that job setting interacts with psychological function to determine values of volunteers. Indeed, the level of satisfaction with forest interpreters experience is positively correlated with the respondents reasons why they participated forest interpretation activities.

Ultimately, forest interpreters' value such as motivation and satisfaction of their job is a key component in effective management of forest recreation programs. Obtaining correct information about their value can give a manager a sense of whether or not the needs of interpreters are being met.

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