

Evaluating the Influence of Nature Centers on Forestry Policy Promotion through New Media

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Abstract

The nature center uses the Documentary Analysis to analyze the forestry policy via new media. The analysis contains the Facebook fan page and the blog analysis. The center for natural education is subordinate to the forestry bureau. In addition to the policy issued by the forestry bureau, it must follow the service capability, service approach and service efficiency of the service efficiency system, in addition to the policy issued by the forestry bureau, in order to ensure that the influence of Natural Centers in the development of environmental education and forestry can be simultaneously taken into account resource management, tourist management and service management.

Key words: Natural Center, New Media, Forestry policy

Introduction

Nature Centers are affiliated with the Forestry Bureau of Taiwan. Message posts released through new media must be in compliance with policies issued by the Forestry Bureau and take into account the serviceability, service approach, and service efficiency of the service performance system to ensure that the nature centers simultaneously engage in resource, visitor, and service management under the influence of environmental education and forestry development. To achieve core administrative objectives, this study investigated the content of the 2016 policy objectives of the Forestry Bureau. The objectives were: (1) to develop an ecological forest and maintain a green resource environment; (2) to develop a recreational forest industry that offers in-depth and high-quality tours with an emphasis on lifestyles of health and sustainability; (3) to develop a safe forest industry and implement the restoration and protection of national land; and (4) to develop high-quality forestry and forest-planting resources. This project analyzed 16 keywords on the basis of environmental, economic, and social aspects, which are presented as follows:

(1) Environmental Aspect

In terms of environmental factors, the Forestry Bureau must maintain forest health and biodiversity, intensify the Satoyama Initiative, and structure the ecological network of national land to ensure sustainable ecological environment. Therefore, according to the first objective, four keywords, namely, "biodiversity," handled animal and plant conservation and habitat conservation to maintain biodiversity, "soil and water conservation," promoted the conservation of water and soil resources, managed the rehabilitation of landslides, alleviates the landslides and sand disasters, and ensures the safety of life and property of the surrounding objects, "protected coast-forest," strengthened the construction of coastal security forest and build a green protection net on the

coast, and "exotic species," reduced invasive alien species against domestic ecological environment, were proposed. In addition, in accordance with the second objective, the keyword "friendly environment," constructed land ecological network, promoted friendly environmental production, and formed a social, productive and ecological landscape in which man and nature coexist, was proposed.

(2) Economic Aspect

The Forestry Bureau should rationally plan the "value-added" utilization of forest ecological resources to promote the sustainable development of the industry and share benefits with the public. Therefore, according to the second objective, three keywords, namely, "ecotourism," promoted tourism activities that take into account natural conservation, cultural preservation and economic development, "green economy," combined local communities and industries with forest resources to drive the local green economy, and "coexistence and coprosperity," conducts diversified eco-tourism activities to promote sustainable development of local industries and economy, were proposed; furthermore, according to the third objective, four keywords, namely, "forest resource management," forest resource management should be defined to strengthen forest land protection and management, strengthen prohibition mechanism, and prevent the main and by-products from stealing forests, "forest land management," implemented forest management in order to prevent forest land being misused, "forest monitoring," promoted sustainable forest management, continuously grasps National Forest resources, and establishes a long-term forest resources monitoring system, and "wood self-sufficiency ratio," effectively and rationally utilizes plantations to provide domestic wood and bamboo timber with stable source and quantity, were established.

(3) Social Aspect

The Forestry Bureau is responsible for improving forest land management, promoting public participation, seeking harmony and stability in the social system, and strengthening national land restoration and protection. Therefore, four keywords, namely, "community interaction," protected the shallow mountain ecosystem by interacting with local community residents and adopting friendly environmental measures, "forestry culture," activated forestry culture and historical sites to provide Chinese people with experience in forestry culture, "environmental education," utilized forest resources to provide high-quality places for natural learning, environmental education and outdoor recreation, and "the aboriginal culture," combines with the tribes around the forest to show the concept of harmonious coexistence between aborigines and nature and traditional wisdom, were proposed according to the fourth objective.

This project involved an analysis of whether the content published in the new media by different centers corresponds with policy information issued by the Forestry Bureau, because

the core values of the courses developed by the centers will be one of the crucial factors in implementing the aforementioned policies. They are also the most basic condition for the survival and development of such centers. At the 2015 National Conference on Sustainable Management of Nature Center, it was proposed that when developing curriculum, nature centers should mainly utilize the characteristics of the field and the expertise of the instructors to teach forestry knowledge and scientific spirit in compliance with environmental education objectives.

Facebook users react to messages in three ways: by praise, by message, or by sharing. Even in the face of the same message, different users may react differently [1]. Firstly, the act of "accepting" means expressing approval and preference for the message issued by the publisher through the act of "accepting". This behavior response belongs to the behavior response of the lowest level among the three reactions, which requires the least cost. Secondly, the "message" response will reflect on the content of the message issued by the message publisher, and then interact and discuss with the publisher. The message response represents the willingness to express their own views or opinions on the message. The "message" response is at the middle level, because it takes a little cost and effort to make a written response to the message for discussion or comment. "Sharing" means recognition of the message, and when you feel that the message is excellent, you will have the intention to share further; "Sharing" belongs to the highest level of response, which requires the most cost. Because once the user "shares" the message, it will be immediately posted on the graffiti wall of all his friends. Before "sharing", the user usually measures the message, including whether it has some value and is worth "sharing", and then is willing to endorse the message. Or you want to help spread the message, increase its exposure, or be discussed, and you want to discuss it with your Facebook friends. Message content is a key factor that triggers the message recipient to share again [2].

One of Facebook's functions is to enable individuals or businesses to set up fan pages. Fan pages are an organizational page with Web 3.0 altar function in Facebook. Facebook users choose to join different fan pages by clicking "Yes" and do not need the approval of the page manager to exit a fan page. It's only necessary to pick up the "Like" [3]. When a fan joins a fan page by "praise", it will be posted on the fan's personal Facebook homepage. When the fan's friends post the message and knot it, it is the chance for the fan page to be exposed again in the community, which may attract more fans to join [4].

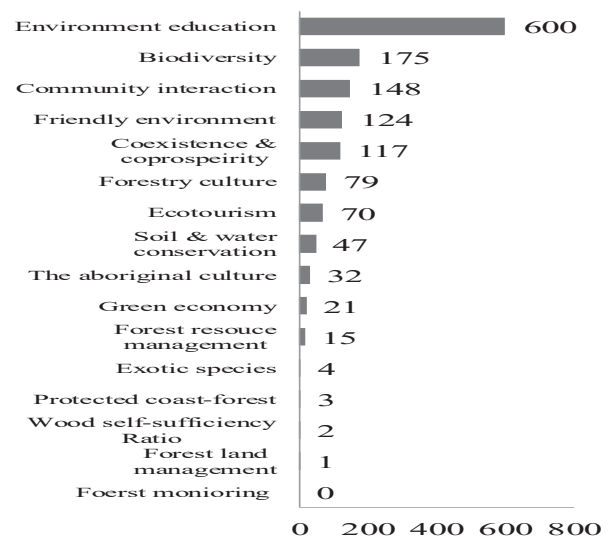
Nature centers promote forestry policy analysis through documentary analysis, which involves analyzing new media such as blogs and Facebook fan pages. Secondary data analysis is a further analysis of the cumulative data, either for the purpose of further analysis of the original data or for the application of the original data to explore another new research issue [5]. The most commonly used secondary data analysis method for Internet is Google Trends. Google Trends is a keyword search record analysis function launched by Google in 2010. Through Google Trends, this study can know the online attention of specific keywords [6]. Google Trends can analyze search traffic for a particular keyword at different times (year, month, day) and regions (country, city) at a certain time, and allow downloading of Search Volume Index [7]. In addition to basic traffic analysis for a single keyword, digital marketing practitioners have also sorted out four major functions of Google Trends: (1) query keyword trends in a specific period of time. (2) it can be compared with other related keywords at the same time. (3) identify potential competitors. (4) find out the key words in special events.

Analysis of the Influence of New Media on Forestry Policy Promotion

As the media managers, most environmental educators in

nature centers engage in marketing. The posted materials collected differed between nature centers, and most of them were mainly based on recent activities at the park or trivial matters that took place on that day.

An analysis was conducted for keywords and articles published by eight nature centers on Facebook fan pages and blogs from January 1 to December 31, 2016. On Facebook fan pages of the 8 nature centers, 1526 posts were published in 2016, including 87 administrative bulletin posts that contained no keywords. In terms of returned keywords, there were 600 for environmental education, 175 for biodiversity, 148 for community interaction, 124 for friendly environment, 117 for coexistence and coprosperity, 79 for forestry culture, 70 for ecotourism, 47 for soil and water conservation, 32 for the aboriginal culture, 21 for green economy, 15 for forest resource management, 4 for exotic species, 3 for coast-forest protection,



2 for wood self-sufficiency ratio, 1 for forest land management, and none for forest monitoring. (Figure 1)

Figure 1 In Terms of Returned Keywords of Forestry Policies in Facebook Posts

Analysis of the Three Major Aspects of Forestry Policy in Facebook Posts

This project is divided into three aspects: environmental, economic, and social aspects. The three aspects were integrated and analyzed to determine users' involvement in Facebook fan pages, which was classified into numbers of likes, comments, and shares.

(1) Environmental Aspect

A. Posts with the most likes

In terms of the environmental aspect, the post with the most likes (148 likes) was from the Facebook fan page of Dongyanshan Nature Center, which contained the keyword "soil and water conservation." The content of the post was related to East Asia cold wave in early 2016 that caused snowfall on the Dongyan Mountain.

B. Post with the most comments

The post with the most comments (15) was from the Facebook fan page of Basianshan Nature Center, which contained the keyword "friendly environment." The content attracted followers by raising questions that helped viewers understand slacklining and forest therapy and by allowing viewers to express their opinions.

C. Most shared posts

The most shared post (53 times) was related to the keyword “biodiversity” and was from the Facebook fan page of Shuangliou Nature Center. The content of the post was related to a study on the sharing of new species of tree frogs in Taiwan. However, the shared content was a personal publication (not from any nature centers); thus, the viewers who shared the post were the author and their relatives and friends.

(2) Economic Aspect

A. Posts with the most likes

The post with the most likes (445 likes) from the aspect of economics was a post from the Facebook fan page of Luodong Nature Center, which contained the keyword “green economy.” The content was related to the promotion of DIY rice dumpling packing activities. To promote the activities, the new media manager of Luodong purchased a sponsored post to reach more people and boost the number of likes.

B. Post with the most comments

The post with the most comments (23) from the Facebook fan page of Aowanda Nature Center was related to the keyword “coexistence and coprosperity.” The post stated that Aowanda offered hotel guests discounts for theme activities, which attracted readers to leave a message to ask for relevant information.

C. Most shared posts

The keyword identified from the most shared post was “coexistence and coprosperity,” posted by Shuangliou Nature Center and shared 48 times. The post promoted the Must Get Wet 2.0 summer camp at the Shuangliou Nature Center. One of the resource attractions of Shuangliou is that participants can see the territorial waters of two different streams. By integrating this attraction into its course, the center attracted people who participated or intended to participate in the course to share the post.

(3) Social Aspect

A. Posts with the most likes

In the social aspect, the post with the most likes was from the post from the Facebook fan page of Luodong Nature Center (1091 likes), with “environmental education” as the keyword. The content promoted the small Darwin Adventure Camp. The new media manager of Luodong purchased a sponsored post to reach more people and boost the number of likes in order to promote the camp.

B. Post with the most comments

The post with the most comments (15) was related to the keyword “community interaction,” and the post was from the Facebook fan page of Jihiben Nature Center. The post interacted with the fans through a lucky draw by giving out a barred owlet flash drive, where fans who commented the first message on February 2, 2016, at 2:22:22 were eligible to participate in the lucky draw. This attracted 15 fans to leave a message. The content of the post and activity could be further considered in combination with the characteristics of the center.

C. Most shared posts

The most shared post was from the Facebook fan page of Chukou Nature Center (shared 73 times), and contained the keyword “community interaction.” The post was a recruitment notice for an environmental educator at Chukou Nature Center. The post was mostly shared by fans with relevant backgrounds to their relatives and friends who were possibly interested in this position.

In summary, posts with the most likes in each aspect were

mainly those promoting the key activities of each nature center. Therefore, some centers purchased sponsored posts to increase exposure; the posts that achieved highest number of comments were mainly aimed at increasing interactions with the public by asking questions and inducing the fans to leave a message through games (i.e., a lucky draw and gift giving); the most frequently shared posts were mainly those promoting the key activities of each center and also those that shared posts from other related topics.

Conclusion and Future Suggestion

The new media managers of each center should comply with the policy objectives and guidelines of the Forest Bureau and prompt the public to understand forestry policies through the Internet. From integrating the content analysis and interview results, four suggestions are presented:

(1) Utilize the special characteristics of each nature center

The resource and curriculum characteristics of each center are different. It is suggested that the resources and special course characteristics of each center be employed in Facebook posts to establish the unique style of the center, in addition to publishing posts in accordance with the guidelines of the Forestry Bureau policy objectives.

(2) Employ back stage data analyses

A. New media managers should appropriately use Facebook fan page background data analysis to identify the main subscriber groups and active hours of each center, and then publish posts focusing on the subscriber groups or their active hours on Facebook.

B. Sponsored posts can be purchased to publicize the main events of a particular season. Although the primacy effect is less important, in the long term, the scope of affected Facebook users will be expanded. At this stage, the advertisements purchased can be discontinued, and the funding can be used for other marketing endeavors.

(3) Write posts related to current affairs

A. New media managers should write posts related to current affairs so that they resonate with the public.

B. New media managers should organize fan reward activities on Facebook in conjunction with relevant festivals. For better results, the recommended rules of the activity are: the post must be set as public and shared among friends.

(4) Devise fan management strategies

A. New media managers should increase interactions with fans by writing posts in question form.

B. New media managers should realize that blogs that have a constant fixed style of management are not any weaker than Facebook fan pages. By contrast, blogs can retain the interest of people who are really interested in environmental education and forest ecosystem-related issues.

The Internet has become the mainstream of the media to receive messages. This research is based on the Facebook fan pages and blogs of Natural Centers of Forestry Bureau, which is one of the external communication channels in the organization of Forestry Bureau. Therefore, it is suggested that the Forestry Bureau should integrate its relevant units to ensure that when its annual policy objectives are released to the outside world, each unit can strengthen its declaration of responsible management. Emphasis should be placed to produce synergies. For many years, besides actively conducting environmental education courses, the environmental education teachers in the nature centers have also managed and managed the community network. In response to the diversity of social networking platforms and

future research proposals, we can explore the comprehensive benefits of different social networking platforms on topic setting.

References

- [1] L. Kwok, and B. Yu. "Spreading social media messages on Facebook: An analysis of restaurant business-to-consumer communications." *Cornell Hospitality Quarterly*, 54(1), 2013, pp. 84-94.
- [2] J. Berger and K. L. Milkman. "What makes online content viral?" *Journal of marketing research*, 49(2), 2012, pp. 192-205.
- [3] H. Y. Pan. "The study of the impacts of brand and community on purchase intention of Facebook bookstore fans Groups." Unpublished Thesis 2011.
- [4] S. H. Zhou. *Facebook Effect in Taiwan: Facebook marketing*. Taipei, TW: World magazine, 2011.
- [5] D.W. Stewart and M. A. Kamins. *Secondary Research: Information Sources and Methods*. New York, NY: Sage Publications, 1993.
- [6] Z. F. Liang. "A study of the regional network attention based on Google Trends- Case study of Xiangtan city". *Journal Hunan University of Science and Technology*, 13(5), 2011, pp. 41-48
- [7] Y. H. Lee, "Prediction of bestselling movies by Google keyword Search." Unpublished Thesis, 2015. (Acknowledgment : This manuscript was translated into English by Wallace)