

Construction Methods of Nanchang Tourism Culture Image Based on Text Information Mining Technology

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Abstract: With the vigorous advancement of urbanization and the continuous development of new media, the issues of urban and communication have become very prominent. Nanchang is famous has an extremely important status and role in politics, economy, and culture, and is a model of the world's best water resources utilization. To promote the tourism and cultural image, the construction of Nanchang 's tourism and the cultural image is of great significance. This paper aims to study the way of constructing the tourism cultural image of Nanchang based on Text Information Mining (TIM) technology and questionnaire survey. Finally, some suggestions are purposed for the promotion of Nanchang's tourism and cultural image in the era of WeMedia.

Keywords: *Text Information Mining, Nanchang, Tourism Culture, Image Construction.*

1. INTRODUCTION

As one of the red heritage cities, Nanchang has always attached great importance to international promotion. Nanchang propaganda stations have been set up in Cambodia, Indonesia, Germany, Japan, Thailand, the Netherlands, Finland and other countries, providing a window for people around the world to understand Nanchang [1-2]. However, with the development of we media, the traditional communication mode has changed from one-to-many to many-to-many, and everyone can economically and conveniently spread information to others [3-4].

Many scholars have studied the construction method of Nanchang tourism culture image. Zeng C, Nakatoh T, Hirokawa S put forward specific suggestions on the layout of tourism industry, the development of tourism resources, the creation of tourism products and the construction of urban facilities [5]. Kaile, ZHANG, Kenji analyzed the development status of Taoism in Nanchang 's tourism industry, and put forward thoughts on the construction of international eco-tourism in Nanchang City, including strengthening planning and formulating to lead integration, creating a Cultural Creative Industry Park, and guiding the society capital participation in cultural product development and other measures [6]. Kuhzady S, Ghasemi V studied and practiced the micro-marketing method of Nanchang smart tourism from the perspective of self-media, and proposed an integrated micro-marketing model with 4C which refers to consumer, cost, convenience and communication as the strategy to promote Nanchang smart tourism marketing [7]. Ayegül Sakaya Güngr, et al. did an in-depth study on the inheritance and development of Nanchang's intangible cultural heritage from the perspective of cultural self-confidence and proposed specific measures such as strengthening cultural exchanges

between China and foreign countries and building educational positions in universities. Among them, the use of new media technology to promote non-genetic inheritance was specifically mentioned [8]. Although the academic research on the construction methods of Nanchang's tourism cultural image is relatively rich, there is relatively little using text information mining technology to construct Nanchang's tourism cultural image. Therefore, the research on the construction method of Nanchang tourism cultural image based on text information mining technology is of great significance.

This paper firstly introduces the TIM technology, which is mainly divided into three aspects: text pre-processing, text representation method and K nearest neighbor algorithm, next uses the text mining information technology to analyze the construction of the tourism and cultural image of Nanchang, then conducts a questionnaire survey, and finally proposes the way of constructing the tourism and cultural image of Nanchang.

2. EMPIRICAL ANALYSIS BASED ON TIM TECHNOLOGY

2.1 Introduction to TIM Technology

The text classification method is one of the methods of information mining. Text classification refers to the automatic optimization and grouping of text collections according to a certain characteristic, so that the text content in the same type has a relatively high degree of similarity, but different categories of the text are quite different. The processing of text classification probably has the following steps: first preprocessing the text, then text representation and training classifiers. Here we mainly

introduce an algorithm K Nearest Neighbor (KNN) [9-10].

The algorithm can be described as follows:

Step 1: Represent the text as a feature vector.

Step 2: Calculate the text similarity between the spatial vector feature of no text in the sample and all the samples in the training set. The calculation formula is shown in the equation (1).

$$\text{Sim} (h_a, h_b) = \frac{\sum_{m=1}^n (V_{am} V_{bm})}{\sqrt{\sum_{m=1}^n V_{am}^2 \sum_{m=1}^n V_{bm}^2}} \quad (1)$$

Where sim represents the similarity between two texts, the larger the value of sim is, the higher the similarity between two texts, h_a and h_b represents two texts, V_{am} , V_{bm} represents the vectors of two texts. Finally, the K largest samples are selected and returned.

2.2 Key Words Procession

The Microblogs content of this paper selected from 1st January 2018 to 1st April 2021, with a total of 35,412 items. In order to assure a referential result and text capacity, the content selecting ends on 29th February.

The total number of tweets on the Powerful Nanchang microblog was 4,531, accounting for 27% of the total number of tweets, divided into regular and non-regular topics. The remaining 73% are non-featured reports. The regular topics are mainly for daily coverage, while the unconventional topics are based on the most newsworthy events in each time period. Overall, the number of retweets and comments on regular topics is limited, while the number of retweets and comments on unconventional

topics is better than that on regular topics because of the more liberal selection of topics and the flexible reporting method.

The keywords and word frequency statistics are shown in Table 1.

Table 1. Text keywords and word frequency statistics table.

Keywords	Word frequency	Keywords	Word frequency
Nanchang	7785	Panda	587
Ganzhou	4587	City	541
Scenic spot	1574	Ancient city	474
Castle Peak	1254	Construction	421
Travel	1120	Guyan	394
Culture	957	Release water	354
Activity	684	Official	254
Ginkgo	214	Metropolis	187
Service	154	Hongkou	134
Traveler	121	Kiwi	107
Safety	95		

The keyword word cloud of the big data shows that the keywords are mainly divided into the following categories.

1. Attractions' promotion Nanchang, Panda, Hongkou, Ginkgo, Guyan, Ancient City, etc.
2. Cultural activities - activities, water release, etc.
3. Urban life - environment, life, safety, city, etc.
4. Urban planning - urban, development, construction, Ganzhou, Sichuan, etc.

Among them, the publicity of Powerful Nanchang focuses on Nanchang, Qin Mountain scenic tourism, urban life, urban planning, etc. The most important category of publicity is not the promotion of festivals and events, and the form of publicity is relatively single.

2.3 Research Findings

Based on the keywords analysis of Nanchang Cultural tourism, there are some problems in We-media publicity. The details are as follows.

1. The way of publicity is relatively simple, which lacks the cultural publicity of festival activities and the broadcasting awareness of culture.
2. The publicity thought is relatively limited. The filtered keywords are quite dispersed and lack the wholeness of Nanchang Culture.
3. The publicity language is relatively single, which reflects the non-diversity and non-internationalization for the target audience.

3. EMPIRICAL STUDY BASED ON QUESTIONNAIRE SURVEY

3.1 Principles of Questionnaire Design

There are several principles for questionnaire preparation as follows.

1. The principle of purpose. Through the refinement of questions, so as not to omit questions that lead to incomplete information, and not to waste questions to obtain unnecessary information.
2. The principle of logic. The questionnaire is logically designed, which helps to know the real cognition of the audience.

3. The principle of generality. The important task of questionnaire design is that the researcher needs to transform theoretical, academic, and professional terms into easy-to-understand language so that the respondents understand the questions and are happy to answer them and answer them correctly. Since this paper explores the content about the communication of cultural image of Nanchang tourism, the questionnaire adds a survey on the medium through which tourists obtain information about Nanchang. According to the components of a cultural image, the questionnaire was designed to address tourists' perceptions of representative material cultural elements, representative spiritual-cultural elements, and representative behavioral cultural elements of Nanchang, respectively.

3.2 Data Collection and Processing

The questionnaire was mainly created, distributed, and collected based on the web based method. The questionnaire was mainly distributed and collected by using Questionnaire Star. Questionnaire Star is a platform for questionnaire creation, distribution, and data analysis, which can provide users with a series of services such as online questionnaire design, data collection, and result from analysis. A total of 500 questionnaires were distributed, and 485 valid questionnaires were collected, with a 97% effective return rate. After collecting all the questionnaires, Questionnaire Star will automatically organize the questionnaire data and can directly download the survey data report. The data report is presented in the form of Excel and can be directly imported into SPSS, which provides convenience for using SPSS software later. In this paper, we use SPSS 22.0 software to count and analyze the questionnaire survey results and conduct a t-test.

3.3 Survey Findings

Representative Material Culture Elements of Nanchang Known by the Respondents. The representative material culture elements recognized by the respondents are shown in Fig. 1.

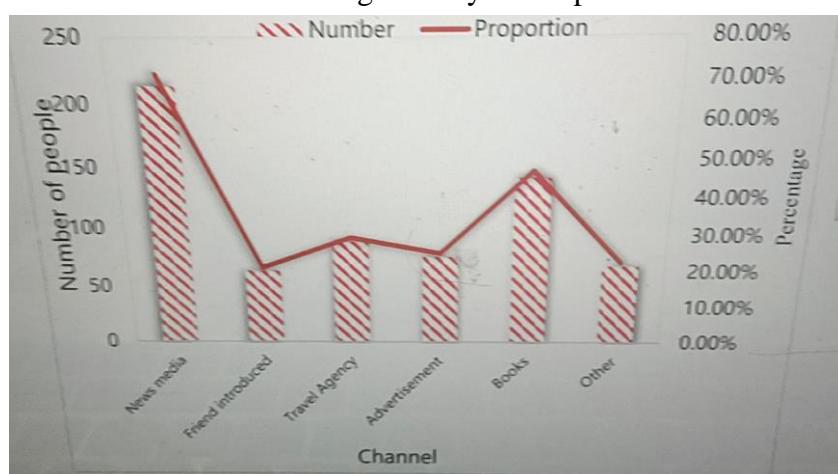


Fig. 1. Channels of knowledge about Nanchang

From Figure 1, we can see that the most widespread method to know about Nanchang is through new media, with 214 people, accounting for 71.3% of all, followed by books, with 142 people, and the next several methods with similar percentages, which are through travel agencies, advertisements, and friends' introduction to know about Nanchang, accounting for 29.6%, 25.3%, and 21.03% respectively. Through this result, we can find that now we are in the era of new media, the fastest way to broadcast proliferation is through new media, so if we want to build the image of Nanchang tourism

culture faster and better, we must make good use of new media.

4. WAYS TO CONSTRUCT THE CULTURAL IMAGE OF NANCHANG TOURISM

4.1 Accelerate the Development of the Whole Area Tourism and promote the Transformation and Upgrading of Tourism

Make full use of the existing resources of Nanchang, integrate the industrial elements into the whole tourism scene, the whole tourism chain, the whole tourism industry, and the whole tourism society, integrate the whole tourism development zone idea, and build the whole tourism development zone from the site, industry, field, management, and other multi-dimensions. Actively expand the city tourism and leisure functions, increase urban greening outside the scenic area, greening the environment, clean streets, and beautify the area.

4.2 Construct the Diversified Communication and Promote Nanchang Culture Spreading Out

In today's developed network and diversified forms of communication, audiences of different ages, genders, occupations, education, and backgrounds need to use different information channels and contents. Therefore, the foreign propaganda translation and dissemination with the help of the network should promptly conform to the development of the times, open a variety of communication channels, concentrate the power of the government and the people, integrate resources, and strengthen the characteristic cultural output. However, to achieve a better communication effect, some proper nouns should be unified in translation, otherwise, different communication media will work separately, the audience will be at a loss, and the communication effect cannot be guaranteed.

4.3 Change the Outmoded Concept and Strengthen Communication Awareness

For Nanchang tourism, the government should actively promote their use of self-media to carry out tourism culture micro communication, to promote the better development of enterprises. Communication activities can be carried out by using Micro communication and self-media platforms, such as microblogging, micro letter, micro video, micro radio, micro-purchase, and other tools or platforms to carry out communication activities.

First, traditional business marketing companies commonly rely on e-commerce platforms, Internet advertising, network marketing, and video advertising to promote brand culture, which plays a certain role in promotion but also has some limitations. In the self-media environment, it is necessary to improve the awareness of micro communication, use tools such as company WeChat, official company microphone, and Shake No. business to promote business, disseminate characteristic and personalized content, and enhance the coverage of business, to better enhance the radiation and influence of business.

Secondly, Nanchang tourism culture should actively break through the shackles of hard communication, based on self-media, and focus on soft marketing of brand culture, to better improve the communication effect of corporate culture signals. Particularly, enterprises should continuously raise the awareness of using self-media to micro-communication of brand culture, elevate it to the level of corporate culture construction, attract employees to participate through corporate inspired culture, and build the micro-communication mode of brand culture. The brand culture of everyone is a self-media makes these micro important to enhance the overall competitiveness and influence of

the company. Finally, to raise awareness of the use of media among employees, we should actively guide employees to make good use of media to promote corporate culture and create personalized accounts to publish positive corporate culture content anytime and anywhere to effectively enhance corporate influence.

5. CONCLUSION

The continuous development of self-media brings new opportunities for Nanchang tourism culture micro-communication. By strengthening the awareness of local brand culture micro-communication, creating a three-dimensional micro-communication matrix of local brand culture brand, absorbing, and training high-level micro communication operation talents, and focusing on maintaining a benign online marketing ecology and other strategies, we can effectively extend the effect of Nanchang tourism culture micro-communication, to better enhance Nanchang tourism culture's influence and development effectiveness.

ACKNOWLEDGMENTS

This work is supported by Ministry of education industry university cooperation collaborative education project (202101055039) and Nanchang Vocational University School Level Project (20-02).

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