# Major Identity of Tourism Management Major Based on Scale Development and Dimensional Measurement

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**Keywords:** Tourism management; Major identity; Factor analysis

**Abstract:** Major identity is an important core issue in major construction and has an important impact on the construction of major and the cultivation of talents. At present, most of the research on subject identification is in the aspects of ideological and political majors and education majors, and there is little research on the identification of tourism management major. The paper analyzes the subject identification of tourism management professionals from the four dimensions of individual, professional, social and industry with four undergraduate students majoring in tourism management. The experiment uses exploratory factor analysis and confirmatory factor analysis to study the influence dimension and influencing factors of the major identification of tourism management. Studies have shown that professional learning, professional development and professional affiliation are the highest associated with disciplinary identity, that is, these three aspects have the greatest impact on disciplinary identity.

## 1. Introduction

Since the reform and opening up, the improvement of people's living standards has greatly promoted the development of tourism. Nowadays, tourism has become an important part of modern life. According to the China Tourism Statistics Yearbook, in 2016, the number of tourists in China reached 4.44 billion, and the tourism income was 3.9 trillion yuan, which provided a solid guarantee for the healthy development of the domestic tourism industry [1].Since the founding of New China, major universities across the country have successively opened tourism management majors. Undergraduate education is a very important level in tourism education at all levels in the country. The quality of undergraduate talent cultivation reflects a professional level to a certain extent.

The Tourism Management Discipline is still in the second-level discipline under the business management of the first-level disciplines of management disciplines in *the Catalogue of Degrees and Talents Training (2011) (2015 Revision)* [2], without independent discipline. Under the establishment of this discipline, the undergraduate education of tourism management has been facing the constraints of the school-running system and insufficient investment since its establishment [3].The tourism management profession has limitations in many aspects of personnel training. The problem of unfounded foundation is outstanding. But, it is difficult to compare with the training model of Western tourism management, especially in professional internship. Moreover, the situation of the tourism management majors who rushed out of the tourism industry after graduation was serious, which led to the emergence of *dislocation of supply and demand*, which led to a series of negative phenomena. So, it is particularly important to study the subject identification of tourism management.

Major identity is an important aspect of discipline construction and educational research. And it is also an important indicator for the pursuit of self-identification and professional development. For scholars, disciplinary identity is related to learning career and career choices, and even affects future work attitudes. Erikson believes that one of the most confusing issues for young people is to gain disciplinary identity [4].Major identity is very broad. For example, *Is it satisfied with my major*,

  DOI: 10.25236/icemc.2019.091

*whether I can find my favorite career according to my major, whether I can feel my value in professional work*, etc. For the development of disciplines, research subject identification has important feedback and guiding significance for professional learning, professional development, professional employment, etc. In terms of factors affecting academic identity, foreign scholar Nehami proposed the identification of professional identity factors including the contradiction between individual needs and professional needs by studying the identification of Arab social work students [5].There is Wang Dingming's definition of disciplinary identity in China. The learner's continuous acceptance and recognition process of his or her major, and a positive attitude to actively learn and explore.[6]

The dimensions of the research on subject identity are also different according to the needs of the research. Through the combing of the literature, the research dimensions are mainly divided into three, four, five, six and seven dimensions. The main researchers in the three-dimensional theory are Wang Dingming, Hu Difei, and Liu Ye. They divide the identity dimension into *cognitive, emotional, and continuous identity* [7].There are also five dimensions of Li Zhi and others when studying the current situation and countermeasures of contemporary college students' professional recognition. It divides research dimensions into *input, reputation, preference, recognition, and matching* [8].Guan Chunlan divides the research dimensions into the research on the current situation of undergraduate students' recognition of special education majors *value and development identity, emotional identity, education identity, professional identity and professional identity* [9].

The study of major identity is not like other studies of specific mathematical relationships. Its influencing factors and influence levels are too subjective. So, in order to accurately study the subject identification, it is necessary to have a method that can sense the senses intuitively. Factor analysis is a method that can be numerically quantified subjectively. It is a powerful tool for social research and is a statistical technique for extracting common factors from variable populations. Factor analysis was first proposed by British psychologist C.E. Spearman. An assumption that can test the relationship between variables.

## 2. Method

The methods of professional identity research mainly include empirical research and theoretical research. The research of empirical research has two kinds of qualitative research and quantitative research, among which quantitative research methods are the main research methods. The researchers distributed the designed questionnaires to the research objects for investigation, and then collected data to analyze the survey results, and then draw conclusions about the corresponding experimental results. The experimental process is as follows.

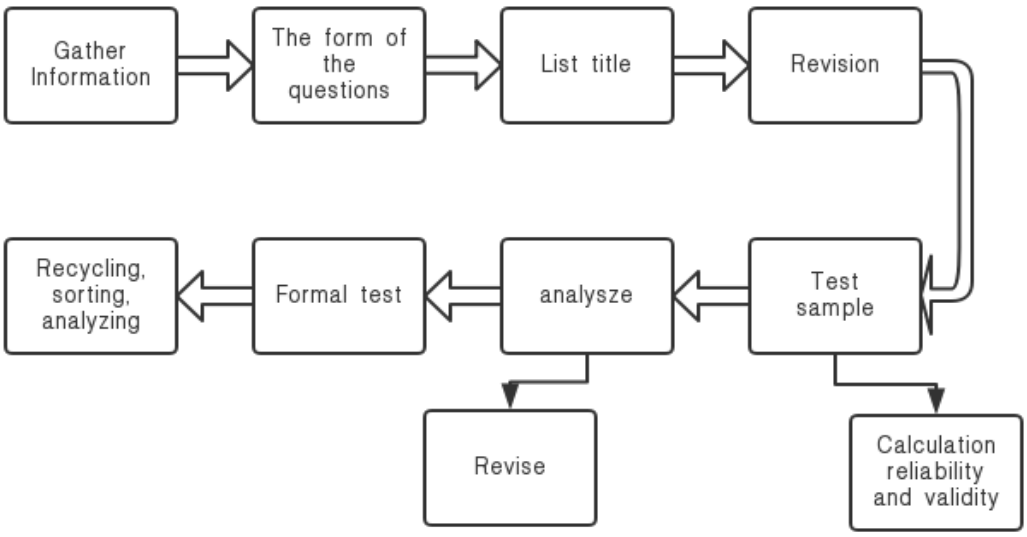


Fig.1 The experimental process

### 2.1 Preliminary Research.

In order to understand the discipline identification of tourism management majors in the tourism management profession and to measure it more accurately, this study used the survey method of questionnaire survey. The direction of research is mainly carried out in five aspects professional study, social recognition, professional development, career development and professional affiliation. The processing of experimental data is processed by scale development and factor analysis.

Regarding the development of scales, the question of designing questionnaires based on the analysis of the influencing factors of the discipline identification of tourism management profession. Then use the seven-point Likert scale to measure the disciplinary identity of undergraduates majoring in tourism management in four colleges and universities. One to seven indicates the degree of recognition of the student's subject, with one being the lowest and seven being the highest.

With regard to factor analysis, factor analysis is the representation of variables as a linear combination of factors. A few factors are used to describe the relationship between a large number of indicators or factors, and the more closely related variables are grouped into the same class, and then each type of variable becomes a factor. Most of the information on the reaction data is reflected with a few factors. This makes it easy to identify the main factors affecting the project and its impact. Factor analysis has exploratory factor analysis and confirmatory factor analysis, both of which are important components of factor analysis. In practice, the two cannot be separated. Only by combining them can they work better and make the research more in-depth.

### 2.2 Exploratory Factor Analysis.

Exploratory factor analysis is used to find the number of factors affecting the observed variables to reveal the essential structure of the observed variables and to perform dimension reduction. Modeling based on sample data without prior knowledge of the influencing factors. The results provide an important foundation and guarantee for confirmatory factor analysis.

Exploratory factor analysis has seven main steps.

(1) Collect Observed Variables. Sampling methods are generally used to collect observational variable data based on actual conditions.

(2) Construct a Correlation Matrix. Based on this matrix, it is determined whether the data is suitable for factor analysis.

(3) Determine the Number of Factors. It is possible to first assume a factor number according to the actual situation, or according to the criterion that the feature root is greater than 1 or the gravel criterion.

(4) Extraction Factor. There are many methods for extracting factors, such as principal component method, weighted least squares method, and maximum likelihood method.

(5) Rotation Factor. Because the initial factor is too comprehensive and difficult to find out, it is necessary to rotate the factor to explain the factor structure. Commonly used rotation methods include orthogonal rotation, oblique rotation, and the like.

(6) Explain the Factor Structure. Explain the factors according to the actual situation and the load size.

(7) Calculate the Factor Score. Use public factors for further research, such as evaluation.

### 2.3 Confirmatory Factor Analysis.

The primary purpose of the confirmatory factor analysis is to determine the ability of the model of the predefined factor to fit the actual data, attempting to test whether the number of factors and the factor load of the observed variable are consistent with previous theoretical expectations. Its strength is to allow researchers to clearly describe the details in a theoretical model.

There are six main steps in confirmatory factor analysis.

(1) Define the Factor Model. Includes the number of selection factors and the definition factor load. The factor load is previously set to zero, or other freely varying constant, or a number that varies under certain conditions.

(2) Collect Observations. Obtain observations based on research purposes.

(3) Obtain a Correlation Coefficient Matrix. Obtain a variable covariance matrix based on the original data.

(4) Fit the Model. Choose a method to estimate the factor load for free change. Such as maximum likelihood estimation, progressive distribution free estimation, etc.

(5) Evaluation Model. When the factor model is able to fit the data, the factor load is chosen to minimize the difference between the correlation matrix contained in the model and the actual observation matrix. Commonly used statistical parameters are chi-square fitting index (X), comparative fitting index (CFI), goodness-of-fit index (GFI), and estimated error root mean square (RMSEA). The proposed criteria of Bentler (1990): X/DF (degrees of freedom) <= 3.0, CFI >=0.90, GFI >=0.85, RMSE <= 0.05, indicating that the degree of fit of the model is acceptable.

(6) Correct the Model. If the model fitting effect is not good, the model needs to be modified or redefined according to the theoretical analysis to correct the model to obtain the optimal model.

## 3. Experiment

In this experiment, 300 students were selected from undergraduate students of tourism management majors from 4 universities using random sampling method. The survey is divided into preparatory research and formal research. The preparatory research and formal survey questionnaires are all based on the offline and online distribution forms. A total of 50 questionnaires were distributed in the preparatory research, and 43 valid questionnaires were successfully recovered. The recovery rate of the valid questionnaires was 96%.The questionnaires issued by the official survey were 300, and 277 valid questionnaires were returned, with a recovery rate of 92.3%.

## 4. Data Analysis

### 4.1 Reliability and Validity Analysis. [10]

In order to verify the accuracy of the survey results, the content of the questionnaire needs to be tested for reliability. In this experiment, the Cronbach's a coefficient was used to test the reliability of the scale. The Cronbach’s a coefficient-consistency table is as follows.

Table 1 The Cronbach’s a coefficient-consistency table

| Cronbach’s a | <0.7 | 0.7-0.8 | >0.8 |
|---|---|---|---|
| consistency | Poor | better | super |

The Cronbach's a value of the experiment calculated from the experimental data was 0.79, indicating that the reliability was acceptable.

The analysis of questionnaire validity is divided into two aspects: content validity and structural validity. Whether the content of the questionnaire for content validity represents all the contents of the survey, the questionnaire of this experiment uses the expert consultation method to repeatedly screen and modify the content, so I think the content validity is higher.

The test of the structural validity of the questionnaire was conducted by exploratory factor analysis. Validation based on Bartlett spherical test and IMO sufficiency test. According to the experimental data analysis, the IMO value is 0.91>0.9. And the accompany probability of Bartlett's spherical validity test is 0.00<0.05, indicating that the test variables have high correlation, so the next exploratory factor analysis can be performed.

### 4.2 Exploratory Factor Analysis.

The number of measurements [11] in the Institute's usage meter was 30, and the exploratory factor analysis was performed using SPPS 23. After purification, the remaining 16 items formed the scale for analysis.

Table 2 The exploratory factor analysis

| Measurement item | Professional Study | Social Recognition | Professional Attribution | Career Development | Professional Development |
|---|---|---|---|---|---|
| Textbooks are suitable for learning needs | 0.772 | -0.024 | 0.087 | 0.54 | 0.089 |
| Curriculum is in line with social requirements | 0.722 | 0.007 | 0.225 | -0.156 | 0.091 |
| Professional internship arrangements are reasonable | 0.698 | 0.010 | 0.132 | -0.137 | -0.033 |
| Make money after attending work | 0.021 | 0.050 | 0.673 | -0.314 | -0.096 |
| Good employment prospects after graduation | 0.165 | -0.037 | 0.633 | -0.314 | -0.022 |
| Have a sense of belonging with people of the same profession | 0.236 | -0.023 | 0.130 | -0.017 | 0.702 |
| I think the tourism industry has nothing to learn. | -0.004 | 0.879 | -0.116 | 0.099 | -0.041 |
| Qualifications are more important than learning | -0.135 | -0.033 | -0.015 | 0.060 | 0.004 |
| Have a perspective on the subject of tourism | 0.166 | -0.084 | 0.054 | -0.052 | 0.127 |
| The tourism industry is not standardized | -0.185 | 0.171 | -0.091 | 0.642 | 0.005 |
| It takes a long time to work at the grassroots level | -0.012 | 0.067 | -0.075 | 0.736 | 0.034 |
| Learning is just to cope with the exam | 0.026 | 0.030 | -0.084 | 0.104 | -0.050 |
| Tourism professional learning atmosphere is good | 0.056 | 0.067 | 0.080 | -0.030 | 0.872 |
| I firmly believe that professional studies will come in handy in the future. | 0.221 | -0.142 | 0.545 | -0.103 | 0.087 |
| Family understanding and support | 0.224 | -0.028 | 0.606 | 0.100 | 0.097 |
| Overall Reliability of the Project | 0.866 | | | | |
| KMO | 0.781 | | | | |
| Bartlett ball test | 0.000 | | | | |

The test reliability value of the scale is 0.866>0.6, indicating that the data results are better. The KMO value was 0.781>0.5, and the Bartlett spherical test was 0.000<0.001, indicating that it is suitable for factor analysis. From the characteristic root value, the mean of the first five factors is >1, indicating that there should be 5 factors, and the cumulative explanation of 59.2% of the information indicates that it is possible to extract five factors [12]. From the factor load rate, the load of each factor is greater than 0.5, indicating that the overall factor purification effect is good. The analysis results are as follows.

Table 3 The analysis results

| | Factor Load | Cronbach's a |
|---|---|---|
| Professional Study | 0.673 | 0.79 |
| Social Recognition | 0.692 | |
| Professional Attribution | 0.714 | |
| Career Development | 0.739 | |
| Professional Development | 0.711 | |

### 4.3 Confirmatory Factor Analysis.

The structural stability test of the scale and data was performed using the confirmatory factor analysis in the structural equation modeling software LISREL 8.20. A path model is constructed by taking 16 items as observation variables (x) and five factors as latent variables (§).According to various fitting indexes to evaluate the quality of the model, the model obtained by the operation has a good fit and meets the requirements(See Figure 2).The path coefficients and t values between the variables show that all t values are > 2.28, indicating that a significant level of 0.01 has been reached [13].It shows that the path relationship is significant, that is, the relationship between the

five factors of the exploratory factor analysis and the 16 items exists and is stable.

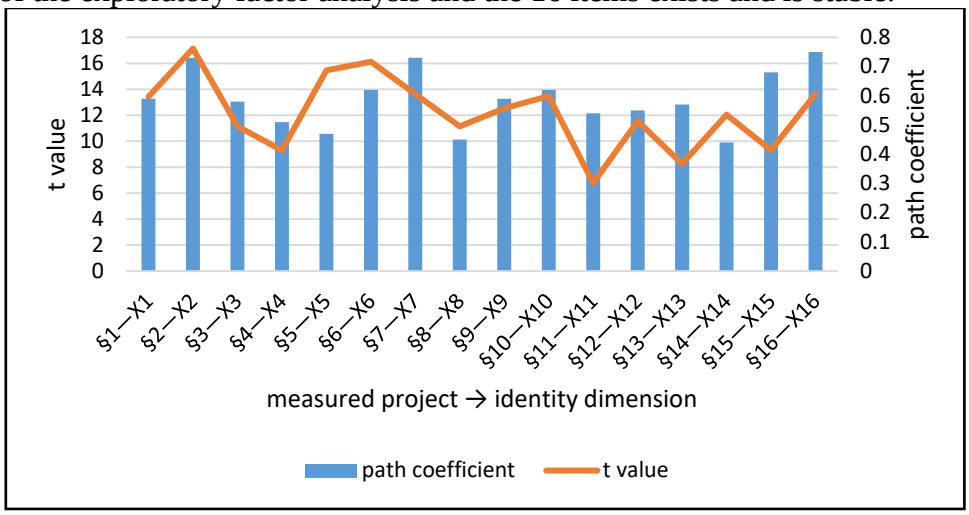


Fig.2 The path relationship

According to the general inspection standard, the Cronbach's a coefficient is preferably higher than 0.7 [14], but when the test term is less than 6, the Cronbach's a coefficient is greater than 0.5 [15].The combined reliability of each factor was 0.672, 0.630, 0.574, 0.552, and 0.671, respectively. Therefore, the reliability of the structural dimension of the confirmatory factor analysis in this experiment was also tested.

## 5. Conclusion

From the model fitting results, it can be seen that in the tourism management discipline identification, professional learning, professional development, and professional attribution are the most relevant to the overall major identity. Explain that the discipline identification of the tourism management profession is mainly the impact of these three aspects. Professional attribution also has a strong correlation in the five dimensional associations, which also illustrates the fundamentals of major identity.

Whether college students agree with their majors directly affects their psychological state in the process of professional study and development. And to a certain extent, it affects the future career orientation and development. major identity is a problem that cannot be ignored. Improving and improving undergraduate major identity is not only conducive to the formation of a positive learning attitude, but also promotes the formation of benign professional development, which has certain significance for society, schools and students.


## Acknowledgement

1) Subsidized by Scientific Research Fund Project of Yunnan Provincial Education Department.

2) Scientific Research Fund Project of Yunnan Education Department. Project number: 2019J0987


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