

## THE STRATEGY OF CONSTRUCTING OF UNIVERSITY IDENTITY SYSTEM IN PUBLIC UNIVERSITIES IN SHENYANG CITY, CHINA

Wang Yi

Sutida Howattanakul

Sataporn Pruettikul

Faculty of Education, Bangkokthonburi University

E-mail: sutida.how@bkkthon.ac.th

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### ABSTRACT

The objectives of this research were: (1) To study the factors that affect the identity images of Shenyang Universities. (2) To study the identity image strategies of Shenyang Universities

This research was a mixed method research, including quantitative research and qualitative research. This paper implemented a quantitative study on the components of the identity system construction of 19 public universities in Shenyang. The researchers were randomly selected from 19 public universities in Shenyang. The main respondents were managers and teachers with work experience in 19 public universities in Shenyang, as well as junior college students, undergraduate students, master's degree and doctoral students studying in 19 universities, a total of 700 samples. The tools used for data collection were semi-structured interview tables and questionnaire stars. Exploratory factor analysis (EFA) was used to reduce irrelevant variables. Using the purposive sampling method, 15 key information providers from three public universities in Shenyang (Northeast University, Liaoning University, Lu Xun Academy of Fine Arts), The tool used for data collection was a semi-structured interview form. The statistical data used for data analysis were frequency, percentage, mean value and standard deviation, and exploratory factor analysis and content analysis are used.

The research findings revealed that; (1)The components that affected the identity of Shenyang Public Universities: UVIS, UBIS and UMIS; and (2) The managerial guidelines on Shenyang Public University Identity System Development Strategy: The evaluation system of University visual identity system included four items: external image, internal image, personality image

and artistic image. The evaluation system of university concept identification system included four items: educational philosophy, educational concept, cultural perception and school running characteristics. The evaluation system of behavior recognition system in Colleges and universities included seven items: teacher quality and organizational system, cultural activities, teaching philosophy, scientific research development, study style service system, and example system.

**Keywords:** University Identity System, Shenyang City, example system

## 1. Introduction

Today, the competition among colleges and universities has risen to a brand competition, and then developed into a cultural competition. In the era of competition, universities must be able to express themselves clearly and pay attention to maintaining good communication with the market and society. If any university loses its unique personality, does not form its own distinctive characteristics, and does not establish a good social image, it will eventually be eliminated by society. In the special period of the transformation of higher education, the personalized and systematic strategy of the university identity recognition system has increasingly become an important choice for universities to expand their influence, improve their popularity and enhance their comprehensive strength. At the same time, the transformation period of higher education and the challenges of competition also require the university itself to gradually put out the wind of blindness, comparison and catching up with the trend, settle down to look at itself, pay attention to the future of the university, carry out long-term, overall and all-round dynamic planning for the university, and improve the competitiveness of the university at a higher level. In this case, the USI (University Identity Identification System) shows its importance. Therefore, this paper discusses the identity recognition system of Shenyang Public University. It is of great significance to improve the identity of Shenyang public universities.

The development of this research provides the possibility for the scientific community to answer these two questions:

- (1) What are the factors that affect the identity images of Shenyang Universities?
- (2) What are the identity image strategies of Shenyang Universities?

## 2. Method

The research methods, sampling methods, data collection tools, and data analysis techniques are described below.

### 3. Research methods

In this study, exploratory factor analysis was used to find out the essential structure of multivariate observation variables, and to process dimensionality reduction techniques, to synthesize variables with intricate relationships into a few core factors. For principal factor analysis, there were no outliers, equidistant values, linear values, multivariate normal distribution, and orthogonality.

### 4. Research samples

According to the structural characteristics of public colleges and universities in Liaoning Province, the researchers randomly selected from 19 public colleges and universities in Shenyang. The main respondents were the management personnel and teachers with work experience in 19 public colleges and universities in Shenyang, as well as the junior college students, undergraduate students, master students and doctoral students studying in 19 colleges and universities, totaling 700 samples.

**Table 1:** Study sample

| Project | University name     | School situation        |  |                                   | Number of samples taken |  |                                   |
|---------|---------------------|-------------------------|--|-----------------------------------|-------------------------|--|-----------------------------------|
|         |                     | Undergraduate and below | Master's degree, doctor's degree and above | Teaching and administrative staff | Undergraduate and below | Master's degree, doctor's degree and above | Teaching and administrative staff |
| 1       | Liaoning University | 18000                   | 8280                                       | 2599                              | 33                      | 15   | 5                                 |

|    |   |       |      |      |    |    |    |
|----|---|-------|------|------|----|----|----|
| 2  | Shenyang University of technology                   | 19019 | 6311 | 1393 | 35 | 12 | 3  |
| 3  | Shenyang Aerospace University                       | 16230 | 3512 | 1600 | 30 | 6  | 3  |
| 4  | Shenyang Ligong University                          | 15321 | 2530 | 1703 | 28 | 5  | 3  |
| 5  | Northeast University                                | 40211 | 8722 | 4490 | 75 | 16 | 9  |
| 6  | Shenyang University of chemical technology          | 14111 | 2211 | 1300 | 26 | 4  | 2  |
| 7  | Shenyang Jianzhu University                         | 11400 | 4800 | 1700 | 21 | 9  | 3  |
| 8  | Shenyang Agricultural University                    | 13467 | 5355 | 1783 | 25 | 10 | 3  |
| 9  | China Medical University                            | 9407  | 6766 | 9103 | 17 | 12 | 17 |
| 10 | Liaoning University of traditional Chinese medicine | 18332 | 6921 | 889  | 34 | 13 | 2  |
| 11 | Shenyang Pharmaceutical University                  | 8592  | 4151 | 1156 | 16 | 8  | 2  |
| 12 | Shenyang Medical College                            | 9965  | 522  | 4404 | 19 | 1  | 8  |
| 13 | Shenyang Normal University                          | 20272 | 3670 | 2243 | 38 | 7  | 5  |

|              |   |               |              |              |            |            |           |
|--------------|---|---------------|--------------|--------------|------------|------------|-----------|
| 14           | Criminal Investigation Police University Of china | 6376          | 1113         | 765          | 12         | 2          | 1         |
| 15           | Shenyang Sport University                         | 7000          | 500          | 700          | 13         | 1          | 1         |
| 16           | Shenyang Conservatory of music                    | 7606          | 486          | 1073         | 14         | 1          | 2         |
| 17           | Lu Xun Academy of fine arts                       | 6637          | 643          | 518          | 13         | 1          | 1         |
| 18           | Shenyang University                               | 11000         | 3224         | 1120         | 21         | 7          | 2         |
| 19           | Shenyang Institute of engineering                 | 12000         | 2311         | 993          | 22         | 4          | 2         |
| <b>Total</b> |   | <b>264946</b> | <b>72028</b> | <b>39532</b> | <b>492</b> | <b>134</b> | <b>74</b> |

In this study, data were collected through online questionnaires. In this research, 700 questionnaires were collected. For the questionnaires with obvious perfunctory answers, such as those with answer time less than 1 minute and obvious consistency of answer options, 586 questionnaires were valid in the final survey and formal analysis stage, with an effective rate of 83.71%. The sampling method of the questionnaire mainly adopts the snowball random sampling method to collect and analyze the samples of this survey.

## 5 .Data collection tools

This study had initially formed a scale containing 57 measurement items, in which visual recognition, concept recognition system and behavior recognition system were based on the research results of relevant scholars, and combined with the needs and conditions of this study. According to the specific situation of this study, it was modified to form the initial comprehensive scale required for this study

In order to ensure the quality of empirical results, this study draws on the research conclusions of Sun Guoqiang (2014) to design a questionnaire. The main contents of the

questionnaire were as follows: 1. First of all, it clarified the background and purpose of the questionnaire; 2. Questionnaire subject: mainly college students. Through college students, we could understand the status quo of school image recognition. This paper used Likert's five point scale method to measure items. The interviewees need to give 1-5 points according to the questions and their actual situation, including 1 "very unimportant", 2 "unimportant", 3 "average", 4 "important" and 5 "very important"

## 6. Data Analysis

### 1) Factor analysis

The factor analysis method to determine the indicator structure of the indicator system reveals the internal logical relationship between different indicators and indicator levels, which was the supporting framework of the entire indicator system. The purpose of factor analysis was to transform multiple original indicators into a few unrelated comprehensive factors to reproduce the relationship between the original indicators. Its main purpose was to simplify the data. In this study, the factor analysis method would be used to analyze and screen the contents of the 57 indicators initially determined, find out the factors that play a major role in the construction of the college student image recognition system, and determine the indicator structure according to the results of factor analysis. The questionnaire of this study involved 57 factors of university image building. According to Gorsach R. L (1983), the ratio of sample size to variable number should be more than 5:1, which is reasonable [5]. Of course, the larger the sample was, the more accurate the survey results would be, but it was very difficult in the actual operation process. Therefore, under the condition of minimizing the error as far as possible and ensuring the smooth progress of the investigation, select the appropriate sample. The survey finally determined that 700 questionnaires were to be distributed, and the number of questionnaires had reached more than 10 times of the number of variables, so it can be considered that the number of samples was reasonable.

### 2) Descriptive statistical analysis

Descriptive statistical analysis was the most basic statistical method to express the characteristics of sample data and the relationship between variables. It mainly involves the concentration trend, dispersion degree and distribution form of sample data. In this study, SPSS 26.0 software was used to analyze descriptive statistics (mean, standard deviation, skewness, kurtosis and other indicators) in order to effectively understand the distribution characteristics of sample data: (1) mean: this study uses the arithmetic mean calculation

method to represent the value of the mean, which could be used to measure the centralized trend of sample data; (2) Standard deviation, also known as mean square error, was the most commonly used quantitative form to reflect the degree of dispersion of a group of data. It was an important indicator to measure the degree of probability of statistical distribution and to indicate the accuracy. The smaller the value, the smaller the difference between most sample data and the mean value, and the smaller the difference between the data; (3) Skewness: the characteristic number representing the degree of asymmetry of the probability distribution density curve relative to the average value. There were three cases: positive deviation, negative deviation, and equal deviation (the skewness value was 0, that was, the symmetric distribution of the sample data). It was generally believed that the smaller the absolute value of the skewness, the more the sample data obey the normal distribution; (4) Kurtosis: it indicated the difference between the tail of the data distribution and the normal distribution, which could help to preliminarily understand the general characteristics of the data distribution.

## 7. Discovery

On the basis of the existing domestic and foreign literature and sample university literature, this study combed and analyzed the measurement methods of key variables such as university identity recognition system in the existing literature, and redesigned the measurement project according to the actual situation of Shenyang Public University. And constitute the first draft of the questionnaire.

On the basis of the first draft of the questionnaire, the wording and content of the questions were further revised to form the second draft of the questionnaire. Combined with the questionnaire, 15 key informants were tested for the consistency of the questionnaire (IOC), and the questionnaire was revised to 48 questions, forming the third draft of the questionnaire.

**Table 2:** Summary of university image identification indicators

| Primary indicator      | Secondary index   | Secondary weight | Tertiary indicators  | Three level weight | Comprehensive weight |
|------------------------|-------------------|------------------|--|--------------------|----------------------|
| Uvis evaluation system | External image    | 0.301            | Places for mass communication and learning                     | 0.067              | 7.85%                |
|                        |                   |                  | Reasonable matching of auxiliary color and background          | 0.06               | 7.02%                |
|                        |                   |                  | External publicity and information transmission                | 0.058              | 6.84%                |
|                        |                   |                  | University website   | 0.058              | 6.75%                |
|                        |                   |                  | architectural style  | 0.048              | 5.65%                |
|                        | Inner image       | 0.275            | Cultural and creative products with university characteristics | 0.049              | 5.24%                |
|                        |                   |                  | University Space Environment                                   | 0.064              | 6.90%                |
|                        |                   |                  | Historical and cultural atmosphere                             | 0.064              | 6.90%                |
|                        |                   |                  | school motto   | 0.058              | 6.22%                |
|                        |                   |                  | Nature of running a school                                     | 0.053              | 5.71%                |
|                        | Personality image | 0.224            | University basic color with distinctive personality            | 0.066              | 5.72%                |
|                        |                   |                  | Landscape can reflect the cultural value of the school         | 0.06               | 5.26%                |
|                        |                   |                  | Good recognition of graphics                                   | 0.053              | 4.65%                |



| Primary indicator      | Secondary index        | Secondary weight | Tertiary indicators  | Three level weight | Comprehensive weight |
|------------------------|------------------------|------------------|--|--------------------|----------------------|
|                        |                        |                  | University prints are recognizable   | 0.053              | 4.63%                |
|                        | Artistic image         | 0.200            | Beautiful combination design   | 0.066              | 5.17%                |
|                        |                        |                  | Combination of logo, greening and landscape                                  | 0.065              | 5.05%                |
|                        |                        |                  | Reasonable collocation of graphic symbols                                    | 0.057              | 4.43%                |
| Uvis evaluation system | educational philosophy | 0.325            | Human centered philosophy of teaching  | 0.086              | 11.21%               |
|                        |                        |                  | The education mode of personal characteristics development as the mainstream | 0.08               | 10.39%               |
|                        |                        |                  | Dialectical unity of education and time                                      | 0.087              | 11.32%               |
|                        | Educational philosophy | 0.258            | The university has a good learning environment                               | 0.084              | 8.66%                |
|                        |                        |                  | Universities encourage academic freedom                                      | 0.09               | 9.33%                |
|                        |                        |                  | Encourage active competition mechanism                                       | 0.086              | 8.89%                |
|                        | Cultural perception    | 0.236            | High recognition of cultural and artistic activities in Universities         | 0.077              | 7.24%                |
|                        |                        |                  | Universities encourage students' innovation and Entrepreneurship             | 0.072              | 6.78%                |

| Primary indicator      | Secondary index                            | Secondary weight | Tertiary indicators   | Three level weight | Comprehensive weight |
|------------------------|--|------------------|---|--------------------|----------------------|
|                        | School running characteristics             |                  | University Motto and school spirit can feel cultural identity                       | 0.072              | 6.77%                |
|                        |  | 0.181            | Universities have their own characteristic disciplines                              | 0.09               | 6.56%                |
|                        |  |                  | Unique teaching mode  | 0.089              | 6.46%                |
|                        |  |                  | Outstanding abilities in scientific research, teaching and practice in Universities | 0.088              | 6.39%                |
| UBIS evaluation system | Teacher literacy and organizational system | 0.183            | High level of teachers in Universities  | 0.048              | 6.16%                |
|                        |  |                  | Teachers' code of conduct   | 0.052              | 6.75%                |
|                        |  |                  | The university scholarship competition system is reasonable                         | 0.05               | 6.54%                |
|                        |  |                  | University and college leaders can set an example                                   | 0.04               | 5.14%                |
|                        | Cultural Activity                          | 0.156            | Regularly carry out team activities in the hospital as a unit                       | 0.045              | 4.99%                |
|                        |  |                  | There are relevant university history exhibitions and celebration activities        | 0.054              | 4.99%                |

| Primary indicator | Secondary index                 | Secondary weight | Tertiary indicators   | Three level weight | Comprehensive weight |
|-------------------|---------------------------------|------------------|---|--------------------|----------------------|
|                   | Teaching philosophy             | 0.14             | The teaching philosophy is people-oriented and respects personality development       | 0.053              | 5.24%                |
|                   |                                 |                  | Pass on the world outlook and values and guide learning                               | 0.056              | 5.50%                |
|                   |                                 |                  | Treat every student fairly  | 0.051              | 5.10%                |
|                   | Scientific research development | 0.139            | Can provide students with an objective scientific research and innovation environment | 0.054              | 5.32%                |
|                   |                                 |                  | Provide scientific research equipment and counseling mechanism                        | 0.052              | 5.14%                |
|                   |                                 |                  | Encourage and reward participation in scientific research activities                  | 0.059              | 5.84%                |
|                   | Study style management system   | 0.136            | Standardized basic knowledge education mode   | 0.064              | 6.17%                |
|                   |                                 |                  | Carry out the cultivation of characteristic cultural skills such as art and sports    | 0.062              | 6.17%                |
|                   | Study style service system      | 0.133            | Guide students' innovation and Entrepreneurship                                       | 0.037              | 3.49%                |

| Primary indicator | Secondary index | Secondary weight | Tertiary indicators   | Three level weight | Comprehensive weight |
|-------------------|-----------------|------------------|---|--------------------|----------------------|
|                   |                 |                  | Provide career planning consulting  | 0.051              | 3.49%                |
|                   | Model system    | 0.115            | Publicize outstanding alumni and establish school identity                | 0.059              | 4.77%                |
|                   |                 |                  | Characteristic class learning style evaluation activities                 | 0.056              | 4.58%                |
|                   |                 |                  | Organizing the propaganda activities of outstanding class students' deeds | 0.057              | 4.62%                |

## 8. Results, Conclusions and Recommendations

There were three components of Studying variables affecting the identity of public universities in Shenyang: Evaluation system of UVIS Evaluation system of UBIS, Evaluation system of UMIS. Through research, it was found that UMIS was the foundation, UBIS was the dominant and UVIS was the bridge, which were mutually causal and indispensable. UMIS was the core, essence and command of university image planning, but it couldn't be directly transformed into the school image. It must display the school image through the behavior recognition system and spread the school image through UVIS; UBIS was a dynamic intermediary communication and integration; UVIS was static embodiment and rendering. Considering all three subsystems, through personalized design and implementation, the construction of a perfect university campus image was conducive to the promotion of the University's spiritual culture, institutional culture and material culture in all aspects, which was the objective requirement of the university to adapt to the times and social development, and also the need of the University's own development.

Developing the managerial guidelines on Shenyang Public University Identity System Development Strategy:

UVIS evaluation system included four items: external image, internal image, personality image and artistic image. The UMIS evaluation system included four items: educational philosophy, educational philosophy, cultural perception, and school running characteristics. UBIS evaluation system included seven items: teacher quality and organizational system, cultural activities, teaching philosophy, scientific research development, study style service system, and example system.

The validation results were slightly different from the components of goal 1. The guidelines provided a more comprehensive and practical way to realize the strategic guidance of the development of Shenyang Public University identity system.

UVIS evaluation system: 1. External image, we should strengthen the transmission of University web pages and external publicity information; Build a place for public exchange and learning; The architectural style of the University and the matching of auxiliary colors and backgrounds were reasonable. 2. Internal image, we should pay attention to the construction of the University space environment and the development of cultural and creative products with university characteristics; The visual inheritance of the historical and cultural atmosphere of the University. 3. Personality images should reflect the cultural value of the University in the construction of the university landscape; College basic colors had a distinct personality and good recognition of graphics; University printed matter was recognizable. 4. Artistic image, the combination design of the University vision system was beautiful, and the matching of graphic symbols was reasonable, which was suitable for different space occasions; Logo were combined with greening and landscape.

UMIS evaluation system: 1. Educational philosophy should follow the people-oriented teaching philosophy and fully respect the development of students; Establish a knowledge-based education model with personal characteristic development as the mainstream; Education and time are dialectically unified. The educational concept was to build a good learning environment, encourage academic freedom, and encourage active competition mechanisms. 3. Cultural perception, we should strengthen the construction of school motto and school spirit, so that everyone could feel cultural identity; The cultural and artistic activities of the university were highly recognized, and students are encouraged to innovate and start businesses. 4. School running characteristics, with its own characteristic disciplines, would have its own educational methods in professional courses, not the same teaching mode; Outstanding ability in scientific research, teaching and practice.

UBIS evaluation system: 1. Teachers' quality and organizational system, university leaders and college leaders could set an example; The level of teachers in universities was high; Teachers' code of conduct; The scholarship competition system was reasonable. 2. For cultural activities, team activities with the college as the unit and related university history exhibitions and celebration activities should be carried out regularly. 3. Teaching philosophy, which was people-oriented and respects personality development; Pass on positive world outlook and values, and guide learning first; Treat every student fairly. 4. With the development of scientific research, universities could provide students with an objective scientific research and innovation environment, provide scientific research equipment and counseling mechanisms, and encourage and reward participation in scientific research activities. 5. Study style management system, with standardized basic knowledge education methods; Carried out the training of characteristic cultural skills such as art and sports; 6. Study style service system, guide students to innovate and start businesses, and provide career planning consulting. 7. The model system should publicize outstanding alumni and establish school identity; regularly hold characteristic class style evaluation activities and organize outstanding class students' deeds publicity activities.

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