

An Empirical Study on the Structure Optimization of Teachers in Guizhou University, China

Yang Zhong Fei^{1*}, Foong Chee Haur² and S.M. Ferdous Azam³

Management and Science University, Seksyen 13, 40100, Shah Alam, Selangor, Malaysia

* E-mail of the corresponding author: 1393657190@qq.com

DOI: 10.29322/IJSRP.9.07.2019.p9181

<http://dx.doi.org/10.29322/IJSRP.9.07.2019.p9181>

Abstract- Establishing a well-structured faculty is not only the focus of the construction of college faculty, but also the only way for the survival and development of universities. The core of the construction of faculty is the professional qualification structure and academic structure. This paper makes a statistical analysis of the changes in the professional qualification structure and academic structure of teachers in Guizhou University in the past three years, and finds out some problems in the construction of the school's teaching staff, and puts forward corresponding countermeasures. The research in this paper was developed based on quantitative research methods, through a measurement model, and tried to gain further understanding. Thereafter, the main data required is collected according to the survey strategy by providing self-administered questionnaires and interviews. Full-time teachers who teach at Guizhou University in China were selected as the sampling framework for this study. The survey results show a positive correlation between the professional qualification structure and the team structure. In addition, there is a significant relationship between the academic structure and the team structure; and the positive relationship between the team structure and the optimization of the faculty. The study shows that the policy has a positive impact on optimizing the teaching staff. The research results analyze the current situation of the construction of the teaching staff, policy optimization, and the average score of the sustainable development of the teaching staff with different professional qualification structures and different academic qualifications. This study is limited to Guizhou University. It can bring some enlightenment to other universities in Guizhou Province when choosing the structure adjustment mechanism of teachers. It provides countermeasures for the adjustment of the teaching staff structure in other universities in Guizhou Province, and provides relevant higher education for the Chinese Ministry of Education and the government. Educational policy provides a theoretical reference. This research can serve as a guide for other factors in future research that will influence the development of the university's faculty.

Key words: Guizhou University; teacher team; optimization; empirical research

I. INTRODUCTION

Founded in 1902, Guizhou University is located in Guiyang, Guizhou Province, China. First-class discipline. The construction of colleges and universities is a national key university jointly established by the Ministry of Education of China and the Guizhou Provincial People's Government, and the best key comprehensive university in Guizhou Province. It is a high-level university with key construction in the western region. In October 1950, it was named Guizhou University. In August 1997, it merged with Guizhou Agricultural College and other institutions. In August 2004, it merged with Guizhou University of Technology. In December 2012, the Ministry of Education and the People's Government of Guizhou Province jointly established universities. In April 2016, it was listed as a national "one province, one school" to support the construction of universities. In November 2017, it was awarded the title of the first Chinese Civilization Campus.

The university has a wide range of subjects, including literature, history, philosophy, science, engineering, agronomy, medicine, economics, management, law, education, and art. There are 40 colleges and 33,064 full-time undergraduate students.

Teachers are the main body of the university. Whether the professional qualification structure and academic structure of the teaching staff are reasonable, directly affects the overall quality of the teaching staff, affects the development of the university, and how to establish a well-structured teaching staff, which is the reform and development of higher education institutions. Fundamental plan. This paper analyzes and analyzes the professional qualification structure and academic structure of the three-year faculty of Guizhou University, finds out some problems existing in the construction of the faculty of the school, and proposes corresponding optimization measures, which is extremely high for the future construction of the university faculty. The reference value will lead the construction of the optimization faculty of other universities in Guizhou, which has important reference significance for other universities in China and abroad.

II. STATISTICAL ANALYSIS OF TEACHER TEAM STRUCTURE

Establishing a well-structured faculty is not only the focus of the construction of university faculty, but also the only way for the survival and development of the university. And the core of the faculty construction is the professional qualification structure and academic structure. Table 1 shows the statistical results of the professional qualification structure and academic structure of teachers in Guizhou University in the past three years. The statistical analysis of the structure of teachers and the changing trends can provide a scientific basis for the development of other universities in Guizhou Province and the future development of the university and the construction of the teaching staff.

Table 1 Statistical Table of Faculty Structure (Guizhou University, 2011.6)

| Category item | 2016.6-2017.6 | | 2017.6-2018.6 | | 2018.6-2019.6 | |
|-----------------|------------------|----------------|------------------|---------------|------------------|----------------|
| | Number of people | Proportion (%) | Number of people | proportion(%) | Number of people | Proportion (%) |
| Total number of | 2513 | | 2842 | | 2523 | |

| teachers | | | | | | | |
|---|---------------------------|------|-------|------|-------|------|-------|
| Professional qualificatio n structure | advanced | 1198 | 47.67 | 1611 | 63.38 | 1593 | 63.14 |
| | Intermediate and below | 1315 | 52.33 | 1231 | 36.62 | 930 | 36.86 |
| Academic structure | Doctor | 286 | 11.38 | 902 | 31.74 | 1006 | 39.88 |
| | master's degree | 1230 | 48.95 | 876 | 30.82 | 1284 | 50.89 |
| | Bachelor | 997 | 39.67 | 1064 | 37.44 | 233 | 9.23 |

As can be seen from Table 1, there are 2,523 full-time teachers in the school. Among them, 1593 teachers with advanced vocational qualifications accounted for 63.14% of the total number of teachers; 930 teachers with intermediate and lower vocational qualifications, accounting for 36.86%. From 2016 to 2019, the absolute number of teachers with intermediate professional qualifications in the faculty increased in 2017, but the proportion of teachers with advanced professional qualifications declined in 2018. Teachers with intermediate and lower vocational qualifications The ratio is rising. This is mainly due to the employment of a large number of young teachers. This trend of change may continue to develop in the next few years and should be given sufficient attention.

Among the full-time teachers of the school, there are 1006 doctoral students, accounting for 39.88% of the total number of teachers; 1284 with master's degrees, accounting for 50.89% of the total number of teachers. There are 233 bachelor's degrees, accounting for 9.23% of the total number of teachers. Relatively speaking, the proportion of teachers with master's degrees is large. From 2016 to 2019, the academic level of the faculty is gradually increasing. The number of teachers with master's degree or above is increasing year by year, and the proportion of teachers with bachelor's degrees is gradually narrowing. The Ministry of Education of the People's Republic of China clearly stipulates that the proportion of doctors in key universities should be greater than or equal to 50% in the evaluation index system of the new national undergraduate colleges. The school should increase the proportion of doctors in full-time teachers from 39.88% in a short period of time. One percentage point, to meet the evaluation criteria of the Ministry of Education of the People's Republic of China, on the one hand, to train young teachers with master's degrees, and to ensure that the proportion of teachers with doctoral degrees in new teachers every year is more than 50%.

The academic structure mainly determines the academic foundation of the teaching staff. The professional qualification structure mainly determines the academic strength of the team. This paper mainly studies how to optimize the teacher's professional qualification structure and how to optimize the teacher's academic degree structure. At present, China's higher education is in the stage of major reform, great development, and great improvement. It is in the key link from scale expansion to quality improvement. Structural adjustment will inevitably become the core of higher education reform, and the best Guizhou University teacher team structure will be developed in Guizhou Province. Research is of great significance. Through the research of this

thesis, it can bring some enlightenment to other universities in Guizhou Province when choosing the structure adjustment measures of teachers. It provides countermeasures for the adjustment of the structure of teachers in other universities in Guizhou Province, and formulates relevant higher education policies for the Chinese Ministry of Education and the government. Provide a theoretical reference.

III. LITERATURE REVIEW

The main theoretical basis of this thesis includes structural function theory, system optimization theory and mutual benefit symbiosis theory.

A. *Structural Function Theory (American sociologist T. Parsons, R. Merton, 1950)*

It is mainly about the relationship between the constitutional state of things and the overall functional state of things. Later, scholars extended and supplemented the theories of T. Parsons and R. Merton. The main points are as follows.

Structure is the basic way of existence of things. The history of human science has been proven that everything has a certain structure, certain things and certain structures coexist, and everything is formed, expressed and integrated as a whole by a given structure. There are no unstructured things, no structure without things. Whether it is a macroscopic cosmic star, a mesoscopically visible object, or a microscopic science, the smallest particle ever discovered - quark, whether it is the universe in the natural world, the human organization of the social world, or the language and thinking of the spiritual world, One is not the existence of structure. The structure is omnipresent and inseparable from things. From a dynamic perspective, structural changes will inevitably lead to changes in things, and the development of things depends on structural optimization.

Structural analysis is the fundamental way to understand things. Structural analysis is the basic method for human beings to understand the world. It is inherently consistent with analytical synthesis. To obtain a comprehensive understanding of things, human beings cannot only examine the superficial phenomena of things and must go deep inside the things. The most common way to analyze things inside is to split the things into multiple parts, and then carefully examine the characteristics of each part, the relationship between each part, and the way each part constitutes the whole thing. Finally, based on the comprehensive understanding of these parts, An intrinsic, essential understanding of the whole thing.

There is a high degree of correlation between structure and function. The theory of structural function considers that the structure and function of things are closely related. A certain structure corresponds to a certain function. Under the same conditions, the structure determines the function. At the same time, there are four relationships between structure and function: one-to-one, one-to-many, many-to-many, and many-to-one. The connection between structure and function is complex, and often has many forms such as isomorphism, heterogeneous isomorphism, and isomorphism. First of all, the university teacher team is a structured system. The structure of teachers in different universities (or university systems) or the same university (or university system) in different periods is often different, even huge. Secondly, structural analysis is the most fundamental way to understand things. We know the team of college teachers and cannot do without the in-depth analysis of their structure. Thirdly, the structure and function of college teachers are highly correlated, the structure determines the function, the different combinations and different connections of the members of the university teachers, the members will have different characteristics of mutual birth, mutual gram, phase checks, phase transformation, and phase neutrality. Therefore, the university teachers team has the functions and functions of different natures and sizes. It can be seen that the theory of structural function not only lays down and enhances the significance of this research in theory, but also provides methodological guidance for the study, especially the discussion of structural optimization standards.

B. System Optimization Theory (Wei Hongsen, Zeng Guoping, 1995)

It is mainly an important branch of general system science. It is the crystallization of system theory and evolutionary cross-infiltration. It focuses on exploring and revealing the general laws of system change and development. The main points are as follows:

Any system is a system that continues to evolve. The system is composed of elements, the constant changes in the nature of the elements themselves, and the constant changes in the relationship between the elements, causing constant changes in the structure, functions, and features of the system. According to the dialectical materialism, any system has an objective existence. Things are in constant change, movement is eternal and absolute, and rest is temporary and relative, and everything must go through the process of creation, development, and extinction. Therefore, any system is a constantly changing system that may be positive, may be negative, or may behave in another form of stagnation. Among them, the forward evolution system is what we call the optimized system.

System optimization is a performance state in system evolution. The system will show different states in the long-term evolution, with optimization and non-optimization. The optimized system is in the positive evolution, the interaction between the elements is good, the part and the whole are coordinated, the energy and potential are huge, the function and The system in the extended state.

System structure optimization is the basis and performance of system optimization. The realization of system optimization is reflected by the improvement of system organization, structure and function. The optimization of structure is the important aspect and key link, that is, system optimization must include the structural optimization of the system. At the same time, system structure optimization is the overall optimization of the system. condition. A distinctive feature of the system is its constitutiveness, that is, any system is composed of elements, and a certain structure is formed between the elements. Therefore, system optimization is inseparable from the optimization of the structure. It is precisely because of the continuous positive adjustment of the structure that the system is continuously optimized. It is unthinkable that a structural imbalance is the overall optimization system. At the same time, structural optimization is the specific performance of system optimization. In a big sense, system optimization refers to the optimization of system structure.

C. Mutual Benefit Symbiosis Theory (Dale. S. Weis, 1879)

First appeared in the field of biology, proposed by the protozoologist Dale. S. Weis. Later, scholars extended and supplemented the theory of Dale. S. Weis. The main points are as follows.

Mutually beneficial symbiosis is the basic way of individual existence. Mutually beneficial symbiosis is a common phenomenon in the biological world and human society, and is the basic way for individual survival and development. Such mutually beneficial commensal individuals can be similar, categorical, or heterogeneous. In social organizations, only individuals can coordinate, help each other, and benefit each other, and individuals can be fully developed, and the functional role of the organization can be expanded and enhanced. In a real market economy society, everyone can only make a profit by contributing to others, and only through mutual benefit can promote market prosperity, wealth growth, and social progress. The market mechanism is a typical mutual benefit. Symbiotic mechanism.

Mutual benefit and symbiosis are important rules for group survival. Individuals in a group do not mutually benefit each other, and the individual will continue to decline into a mutation, and the group will become degenerate, deformed and even die. Therefore,

mutual benefit and symbiosis is the individual's life from the individual point of view. It is the whole life from the group or the system. Because the individual and the group are interdependent, the individual's life supports the group or system, and the group or system is the individual. Students provide space and opportunities.

Mutually beneficial symbiosis is the exchange of information, complementing each other's strengths, complementing each other's strengths, and achieving win-win development. The premise of mutual benefit is that you have nothing to do with me, you are open, connected, and interact with each other. The key is to exchange with each other. The purpose is to be symbiotic, that is, to develop together. Therefore, mutual benefit and symbiosis is the exchange of information or energy, complementing each other's strengths, complementing each other's strengths, and achieving win-win development.

Mutually beneficial symbiosis and structural optimization are inherently consistent. The theory of mutual benefit and symbiosis focuses on the basic characteristics of structural optimization from the interconnection and complementary relationship between elements. The mutual symbiosis between individuals within the system is conditional, and the effect of mutual benefit and symbiosis is limited by the relationship between system elements and system elements, that is, the overall structure of the system. If the individual functions of the system are similar, then only the functions will be accumulated and the mutual symbiosis will not be generated. If there is too much or too much between the individuals in the system, there will be too little or too much and too little. Then, there will be no mutually beneficial symbiosis or mutual benefit symbiosis effect; if the individuals in the system are loosely isolated, mutually closed, the connection mode is single or the connection relationship is broken, then the mutual symbiosis effect is also difficult to produce. The above series of "if" are related to the structural problems of the system itself. Therefore, there is internal consistency between mutual benefit and structural optimization, structural optimization promotes mutual benefit and symbiosis, and mutual benefit and symbiosis reflect structural optimization. From the mutual benefit symbiosis between the individual systems, the optimization of the system structure can be judged to some extent.

D. Theoretical review

Improve the proportion of high-level talents. Chen Yongmei (2018) believes that teachers' academic qualifications and professional qualifications are important indicators of teachers' quality. The degree of education reflects the extent to which teachers receive formal education. Professional qualifications reflect the academic and working abilities of teachers. Therefore, in line with the principle of "based on training and active introduction", we should introduce young and highly educated talents in various preferential conditions, and actively introduce high-quality and highly qualified professionals with high academic qualifications. Improve the professional qualification structure and academic structure of the faculty. Zhang Xiaoxu (2014) believes that the implementation of young and middle-aged teacher training programs, strengthen continuing education, improve the academic level, form a complete talent training chain, optimize the teacher's knowledge structure, improve the overall quality of the teaching staff, and enable a group of young and promising rising stars to grow rapidly. Get up and gradually take up the heavy responsibility of discipline construction. Zhang Yingqiang & Jiang Hualin. (2014) believes that the construction of the echelon of disciplines will enable the formation of a reasonable echelon in all disciplines of the school, and improve the imbalance between the academic qualifications, professional qualifications, age, and academic boundaries of echelon members in different disciplines. The overall structure of the school's faculty has become more rational and strives for all-round development.

Improve and perfect the professional training system with advanced professional qualifications and high education. Yao Xu (2016) believes that the overall professional qualification level of university teachers is low. The construction of teachers in provincial universities needs to develop a long-term teacher construction plan and broaden the channels for introducing high vocational qualifications to adapt to the development of transformation. It is necessary to establish and improve the advanced professional

qualification training mechanism and establish a practical evaluation system; Liu Jun (2014), to study the construction of provincial-level university teachers, to run schools for colleges, rationally plan and train senior professionals, people-oriented, and respect teachers. Strengthen the centripetal force, train teachers, increase training, expand training channels, deepen the reform of personnel distribution system, establish an effective performance management mechanism for teachers, and rely on the government's public resources to ensure the development and construction of teaching staff; Gao Jiaqi (2013) believes that it should be from the government, universities Starting from the three middle aspects of teachers, we are looking for effective ways to improve the level of college lecturers. It is pointed out that the government should lead talent training with the scientific development concept. With the direction of the construction of teachers, universities should give full play to the construction of teachers. The role of teachers should start from their own, improve the quality of teaching and research, and cooperate with the construction of teachers.

The policy affects the structure of the faculty. Han Fubin (2016) proposed that China's provincial universities should establish a policy system for teacher recruitment, talent introduction and senior professional qualifications, formulate or revise relevant policies, and optimize the structure of the teaching staff; Wang Yiding & Wang Weiying (2015) believe that the university's faculty construction It has a great relationship with the transformation and development of local undergraduate colleges. It not only requires the efforts of the university itself, but also the support of the government and the society. The university needs to reform its personnel management system and teacher training system. The government must be qualified for talents and schools. Cooperate and other aspects to give strong support to jointly create a faculty with new characteristics in line with the requirements of the university, in order to cultivate high-level professional and technical personnel; Jin Quan (2009) believes that policy is the primary factor affecting the construction of university faculty, and promotes the development of higher education The foundation and long-term impact. To improve the existing university teacher policy work, we should start from four aspects: accurately constructing policy issues, improving the policy-making participant mechanism, coordinating the relationship between policies, and improving the importance of policy implementation.

Optimize the research of the faculty team. Yan Xiaolei & Wang Zhifei (2017) analyzed the dilemma and connotation of the construction of the teaching staff of provincial universities, and proposed to optimize the teaching staff through innovative methods based on criteria such as thinking renewal, connotation construction, collaborative cooperation, and teacher performance appraisal. The demand for rapid development; Zhong Binglin & Wang Xinfeng (2016) believe that science draws on international experience, localization practice, teacher selection, hiring and dismissal related systems, etc., and puts forward suggestions for Chinese university optimizable faculty; Liu Xiaoge (2013) Considering the new situation of China's higher education transition from elite to mass, it is proposed to ensure the stable and sustainable development of higher education. The key is the performance appraisal and promotion mechanism of the teaching staff of colleges and universities.

IV. RESEARCH METHOD

This study believes that the structure of the teaching staff of Guizhou University has achieved initial results after many years of adjustment, but there are still many problems. This paper proposes the following three research hypotheses. Figure 1 shows the conceptual framework presented in this study.

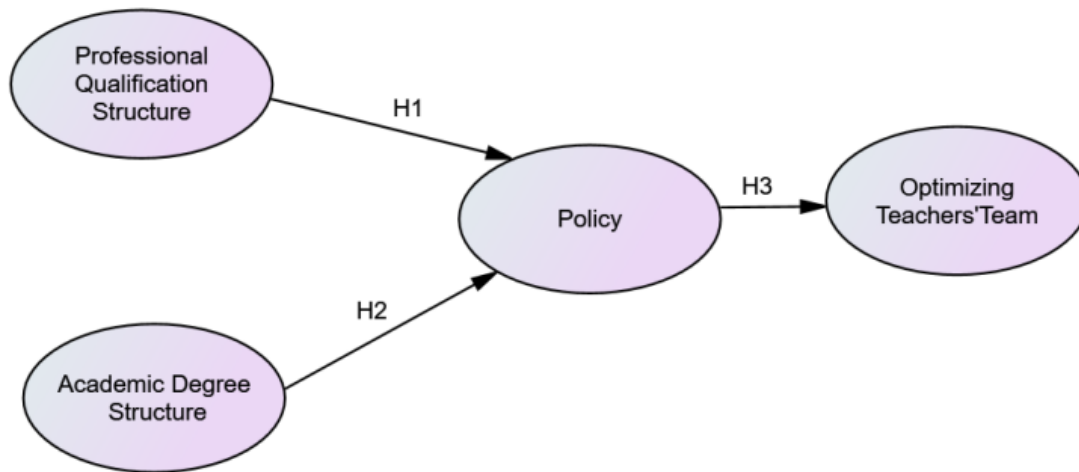


Figure 1: Conceptual framework

Hypothesis 1 (H1): The professional qualification structure has a significant positive impact on the policies of Guizhou University.

Hypothesis 2 (H2): The degree structure has a significant positive impact on the policies of Guizhou University.

Hypothesis 3 (H3): The policy has a significant positive effect on optimizing the faculty.

This thesis takes the teachers of Guizhou University as a sample. This study uses a combination of questionnaires and interviews to investigate the professional qualification structure and academic degree structure of the teachers in Guizhou University. 254 individual questionnaires were distributed, 250 valid questionnaires were returned, and the effective questionnaire recovery rate was 98.4%. The demographic characteristics of the respondents were descriptively analyzed using spss 21.0 and the reliability of the study variables was analyzed. Use amos version 21.0 to test the hypothesis of this research development.

Data analysis and discovery

Based on the respondents' responses to the items in the questionnaire, Table 1 provides an average score for four areas: professional qualification structure, degree structure, policy optimization, and optimization of the faculty. The scores in the intervals [0-4], [4-4.5] and [4.5-5] indicate that the degree of recognition has low, medium and high levels, respectively. The current situation of the construction of the faculty team is mainly reflected in two aspects: the professional qualification structure and the degree structure. The higher the score, the more stringent the conditions for building a faculty team.

Table 1: Levels of Instructor Team Indicators

| | Mean | standard deviation | Level |
|--------------------------------------|----------|--------------------|--------|
| Professional qualification structure | 4.549982 | 0.262639 | high |
| Degree structure | 4.387926 | 0.256662 | medium |
| policy | 4.587976 | 0.137224 | high |
| Optimize the faculty | 4.560306 | 0.471331 | high |

Table 2 shows the survey status of the faculty team, policy optimization, and the average score of the faculty team structure optimization with different professional qualifications and different levels of education.

Table 2: Average scores of respondents with different professional qualifications and different levels of education

| | N | Status of the lecturer team | Policy optimization | Optimize the faculty |
|--|-----|-----------------------------|---------------------|----------------------|
| Lecturer and below | 110 | 4.71 | 4.72 | 4.68 |
| Deputy senior professional qualification | 85 | 4.41 | 4.56 | 4.47 |
| Positive professional qualification | 59 | 4.52 | 4.57 | 4.61 |
| Bachelor | 90 | 4.51 | 4.63 | 4.58 |
| master's degree | 134 | 4.48 | 4.62 | 4.49 |
| Doctor | 30 | 4.52 | 4.64 | 4.59 |

Besides that, Hair et al. (2009) have mentioned that it is essential to conduct factor analysis, as it helps researchers in summarising

the information gathered from a particular set of data. However, before proceeding with EFA, two tests, namely, Kaiser-Meyer-Olkin (KMO) and Bartlett’s Test of Sphericity, should be verified for checking the factorability of data (Pallant, 2007). Tabachnick et al. (2001) have indicated that the value of the first test (KMO) ranges from 0 to 1, and for an appropriate analysis it is essential to have at least a value of 0.6, and for the latter (Bartlett’s Test of Sphericity) it is essential to attain a significant p-value ($p < .05$). After running both of these several tests through SPSS, it was observed that the results of both fell within the acceptable range, indicating that the researcher can run EFA. The outcomes of the tests are shown below in Table 4. From EFA, certain items have been derived, and all the items are considered to be significant as they managed to load with a value higher than 0.50, and any loading above this value is considered to be practically significant by Hair et al. (2009). It shows that the total variance accounted for approximately 72.824% per cent, which is highly adequate. A higher variance is explained when eight components are retained. Cronbach’s alpha has also been calculated for all the items of the four variables. It can be seen in Table 4, all items under each of the variables are reliable as they all have surpassed the minimum value of .60 suggested by Hair, Black, Babin, and Anderson (2010).

Table 3: Kaiser-Meyer-Olkin (KMO) & Bartlett’s test

| | | |
|--|--------------------|----------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .797 |
| | Approx. Chi-Square | 5391.860 |
| Bartlett’s Test of Sphericity | Df | |
| | Sig. | .000 |

Descriptive statistics help to interpret data consequentially by summarizing the data set of the population or sample (Malhotra, 2011). To achieve the basic features of the data set, the following methods of descriptive statistics have been applied to the data of this study.

Table 4: Descriptive Statistics and Reliability Measures

| Variables | Mean (Item) | SD (Item) | Cronbach Alpha |
|-----------|-------------|-----------|----------------|
|-----------|-------------|-----------|----------------|

| | | | |
|--------------------------------------|--------|--------|------|
| Professional qualification structure | 3.8368 | .68905 | .889 |
| Degree structure | 3.7167 | .71288 | |
| Team Structure | 3.81 | 1.103 | |
| Optimize the faculty | 3.65 | 1.132 | |

As can be seen from Table 4 above, the occupational structure, degree structure, team structure, optimization of the faculty, Team Structure and norms and values have mean scores 3.84, 3.72, 3.81 and 3.65. As respective of the values drops below 4.0, a corresponding value equivalent to agree on the five-point Likert scale, the concluding remark is that there is a need for some consideration to increase satisfaction on these cultural factors. The standard deviation of the first six constructs indicates that the responses on average were the same deviation of the first six constructs indicating that the responses on average were a small below 1 point away from the mean. It reflects the fact that the mean of the sample more accurately portrays the mean of the actual population. All of the constructs used in the study are reflective.

In an attempt to calculate measurement errors, each of the latent constructs was measured by multiple observed items (See Table 5).

Table 5: Results of Reliability and Validity

| Key Factors (Constructs) | Sub-Factors (Item) | Communalities | Factor Loadings | Mean | S.D | Cronbach's α |
|--------------------------------------|--------------------|---------------|-----------------|------|-------|---------------------|
| Professional qualification structure | PQS1 | .723 | .779 | 3.39 | 1.059 | 0.903 |
| | PQS2 | .739 | .763 | 3.56 | 1.270 | |
| | PQS3 | .687 | .767 | 3.67 | 1.180 | |
| | PQS4 | .623 | .514 | 3.93 | .984 | |

| | | | | | |
|----------------------|-------|------|------|------|-------|
| Degree structure | AS 1 | .714 | .555 | 3.65 | 1.051 |
| | AS 2 | .666 | .656 | 3.72 | 1.053 |
| | AS 3 | .739 | .793 | 3.73 | 1.165 |
| | AS 4 | .620 | .515 | 3.64 | 1.039 |
| | AS 5 | .677 | .537 | 3.73 | 1.078 |
| | AS 6 | .800 | .748 | 3.50 | 1.168 |
| | AS 7 | .603 | .680 | 3.70 | 1.092 |
| Team Structure | TS 1 | .563 | .718 | 3.71 | .951 |
| | TS 2 | .674 | .563 | 3.94 | .996 |
| | TS 3 | .757 | .798 | 3.67 | 1.104 |
| Optimize the faculty | OTT 1 | .769 | .755 | 3.50 | 1.103 |
| | OTT 2 | .831 | .688 | 3.23 | 1.339 |
| | OTT 3 | .765 | .671 | 3.52 | 1.168 |

This study adopted a two-step technique of model through SME analysis recommended by Anderson and Gerbing, (1988). In this technique, data was analyzed initially through factor analysis, which provides an assessment of measurement reliability, convergent and discriminant validity. Then, the structural equation model was conducted to test the model fit and to understand the hypothesized relationships. Before the model test, the correlation matrix for all constructs of the proposed model was examined. The results of and correlations among the variables are shown in Table 6.

Table 6: Summary of Correlations among Constructs

| Constructs | Correlations |
|------------|--------------|
|------------|--------------|

| | Professional qualification structure | Academic structure | Team Structure | Optimize the faculty |
|--------------------------------------|--------------------------------------|--------------------|----------------|----------------------|
| Professional qualification structure | 1 | | | |
| Academic structure | .692** | 1 | | |
| Team structure | .680** | .626** | 1 | |
| Optimize the faculty | .474** | .577** | .305** | 1 |
| | .621** | .735** | .525** | .664** |

** Correlation is significant at the 0.01 level (2-tailed)

The correlations indicate indicated that the scales are empirically distinct from each other. The correlation matrix indicates that are positive correlations among all of the study variables. Pearson Correlations co-efficient is 0.689 between professional qualification structure and academic structure, which indicates a positive moderately high linear relationship and this relationship exists at the significant level of 0.01. The correlations co-efficient between professional qualification structure and team structure, , team Structural and academic structure, as well as team structure, are 0.790, 0.636 and 0.745 respectively which indicate there is that moderate relationship among them. These relationships are also significant at 0.01 level. Relationships between other constructs are also significant at 0.01 level.

Assessing Reliability and Validity

The estimates of structural relationships can be biased unless the measurement instrument is reliable and valid. Therefore, reliability and validity should be measured to make this study authentic. Reliability of each construct has been assessed through a degree of internal consistency. This analysis was conducted before other analyses. For data to be considered reliable, the value of its Cronbach’s alpha should be >0.7 (Nunnally, 1978). The reliability analysis of this paper sample produced a Cronbach’s alpha of 0.903 (Table 5), meaning that all items used in the questionnaire were reliable.

Next, the construct validity was calculated by the factor analysis. Where the Principle Component Analysis with Varimax rotation has been applied to minimizes the number of variables with extreme loadings on a factor. After the rotated component matrix, it

is assumed that variables are loaded onto factors. Convergent validity means that the variables within a single factor are highly correlated. This is evident by the factor loadings in Table 5.

Communality means the extent to which an item correlates with all other items that indicate higher communalities are better. If communalities for a particular variable is low (between 0 - .4), then that variable may struggle to load significantly on any factor. So, the values of communalities are more than 0.5 estimates that all items have a pretty good quality of influence in all.

Discriminant validity refers to the extent to which factors are distinct and uncorrelated. To meet the discriminant validity, the variable should relate more strongly to their factor than to another factor. Two primary methods help to determine discriminant validity. The first method is to examine the rotated component matrix. Variables should load significantly only on one factor. The rest of the items were, and the discriminant validity is assumed.

Another method for validity testing is to examine the factor correlation matrix and correlations between the key strategic factors which should not exceed 0.8 (Kenneth, 1988). Thus, in this method, Table 6 presented that all of the correlation values between factors are below 0.8, which provide support to the discriminant validity. Overall, according to the evidence of reliability, convergent validity and discriminant validity, the measurement model was believed to be appropriate.

Hypothesis Testing

After the model was found to be acceptable by examining the model fit indices, the proposed hypotheses were tested using Structural Equation Modeling (SEM) technique with Maximum Likelihood Estimation. Within the overall model, the estimates of the structural coefficients provide the basis for testing the proposed hypotheses. Hypotheses are tested by examining the significance level, direction and magnitude of the standardized estimates of paths that link independent variables with the dependent variable. The summarized results are presented in Table 7.

Table 7: Results of Path Analysis

| Hypothesis | | | | Estimates | P value | Result |
|------------|--------------------------------------|---|----------------|-----------|---------|----------|
| H1 | Professional qualification structure | → | Team Structure | 0.777 | *** | Accepted |
| H2 | Academic structure | → | Team Structure | 0.898 | *** | Accepted |

| | | | | | | |
|----|----------------|---|----------------------|-------|-----|----------|
| H3 | Team Structure | → | Optimize the faculty | 0.714 | *** | Accepted |
|----|----------------|---|----------------------|-------|-----|----------|

Source: AMOS output by analyzing primary data

The result shows that the estimated value for the qualification structure in the prediction of Team Structure is 0.777 and p-value is less than 0.01. This indicates a positive relationship found between the professional qualification structure and Team Structure. The p-value is .000, Which means this relationship is significant at a level of .01 (Table 7). The result presents that, the estimated value for one of cultural factor which is educational structure and Team Structure is 0.898 and p-value is less than 0.01. There is a significant relationship found between the structure and the Team Structure. The p-value is .000, which means this relationship is significant at a level of .01 (Table 7). The result shows that the estimated value for Team Structure in the The meaning of the optimization faculty is .714 and p-value is less than .01. This means there is a positive relationship found between Team Structure and optimization faculty. The p-value is .000, which means this relationship is significant at a Level of .01 (Table 7). TheThe hypothesized relationships between exogenous and endogenous variables are significant at .01 level. The directional relationships between them are statistically established (Table 7). So, H1, H2, and H3 hypotheses are accepted at .01 levels. All hypotheses are established through this study .

Therefore, H1, H2, H3 are accepted at a significance level of $p > 0.000$ of 0.5. The study shows that this policy (POL) has a positive impact on the optimization of the faculty (OTT).

V. DISCUSSION AND CONCLUSION

By referring to the professional qualification structure, degree structure and policy optimization revealed in the current research, and optimizing the relationship between the faculty, it can be concluded that the faculty structure of Guizhou University needs to be further optimized. To optimize the structure of the teaching staff of Guizhou University, it is necessary to prescribe the right medicine and choose effective measures. The level of faculty construction not only requires Guizhou University to introduce policies that are conducive to the construction of faculty, but also requires the government to give policy support to the faculty of the university.

Improve the professional qualification review system and optimize the professional qualification structure. There are many factors that affect the irrational structure of the professional qualifications of college teachers. The unreasonable vocational qualification review system is an important aspect, so this situation should be changed as soon as possible. First of all, to change the previous professional qualification assessment system, that is, to change the standard system of professional qualifications. Secondly, it will <http://dx.doi.org/10.29322/IJSRP.9.07.2019.p9181> www.ijsrp.org

change the method of assessing the professional qualifications of the scientific research and the scientific research. Therefore, in the process of teacher professional qualification assessment, the ability and contribution of teachers should be evaluated mainly from the aspect of teaching, that is, the standard of vocational qualifications should be based on teaching, taking into account scientific research and social services. Again, emphasis on teacher business training, skills training and business assistance. The promotion of professional qualifications is based on ability. Without the promotion of ability, there is no promotion of professional qualifications.

Improve academic standards, strengthen academic qualifications, and optimize academic structure. First of all, moderately improve the academic qualifications for the qualifications of college teachers. By adjusting or formulating relevant policies, it is stipulated that in the future, hiring teachers must first have a master's degree or above, and gradually improve the overall level of the teaching staff by improving the qualifications of professional qualifications. Secondly, university administrators should vigorously tap potential resources, scientifically allocate existing resources, and should be inclined to the construction of teachers in the use of funds. Attract and recruit more doctoral students by improving the treatment of teachers, changing management methods, and creating a good atmosphere. Health. Once again, increase the academic qualifications of in-service teachers. At present, the proportion of teachers with only master's degree or below is still relatively large. To optimize the academic qualification structure of the teaching staff, in addition to vigorously recruiting highly educated teachers, another way out is to select or encourage teachers to pursue doctoral degrees and gradually increase teachers. The proportion of highly educated teachers in the team.

The government has appropriately raised the relevant policies for professional qualifications and higher education standards, and strictly established the minimum academic qualifications for the promotion of professional qualifications for professors and deputy teachers. The government adjusts the administrative orientation of over-administration, transforms micro-management into macro-management, actively guides and urges colleges and universities to adjust the structure of teachers' teams independently from the macro level; the university adjusts the administrative orientation of over-administration, respects the academic development rules and academic professional characteristics, and adopts science. Reasonable measures to optimize the structure of the teaching staff. Second, the government and universities should adjust the development orientation of higher education with emphasis on scale expansion and light structure adjustment. The government scientifically formulates macroeconomic policies to guide colleges and universities to attach importance to and adjust the structure of the teaching staff. By tapping potential resources and integrating existing forces, universities adjust the matching relationship of elements, promote academic exchanges among teachers, and optimize the structure of teachers. Strengthen the rational regulation and control of the government, and guide the university to adjust and optimize the structure of the teaching staff through scientifically formulating and strictly implementing various relevant academic professional policies. The government increased funding, expanded opportunities for teachers to

exchange and cooperate, and provided more opportunities for teachers to study abroad, visits, and academic cooperation. The university itself increased special funds and vigorously introduced various high-level talents that are conducive to adjusting the structure of the original teachers. In short, sufficient school funding is an important basis for optimizing the structure of local undergraduate college teachers.

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AUTHORS

First Author – Yang Zhongfei, PhD scholar, Management and Science University, Malaysia, He born in Tongren City, Guizhou Province, China, Dean of Continuing Education, Tongren University, mainly engaged in human resources management research.

E-mail: 1393657190@qq.com

Second Author –Dr Foong Chee Haur, He has earned a PhD Degree from Management and Science University Malaysia (MSU). His Doctoral research was related to marketing, advertising practice and Malaysian online business. Also, he has published numerous articles in international refereed journals in the area of marketing, online businesses and management etc. Moreover, he has several years of teaching experience in various subjects related to marketing, international business, management, organisational behaviour. He also has extensive experience with the corporate environment and consulting practice.

E-mail: fch8828@gmail.com

Third Author –Dr S.M. Ferdous Azam, He has earned a PhD Degree from International Islamic University Malaysia (IIUM), who is currently working in Management and Science University (MSU) Malaysia. His Doctoral research was related to financial economics, management practice and Malaysian small and medium enterprises (SMEs). Also, he has presented his research works in many international conferences, as well as published numerous articles in international refereed journals in the area of finance, economics, marketing, businesses and management, small and medium enterprises, e-commerce, education etc. Moreover, he has several years of teaching experience in various subjects related to the finance, economics, management and research methodology in three different universities.

E-mail: Dr. S. M. Ferdous Azam

Correspondence Author – Yang ZhongFei, E-mail: 1393657190@qq.com, contact number. 13096865678