RESEARCH ON THE TRANSFORMATION OF APPLIED UNIVERSITIES IN LIAONING PROVINCE

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ABSTRACT

This study investigates the factors and methods of transformation of applied universities in Liaoning Province. The research method is mixed methodological research, including qualitative and quantitative research. The researcher makes many comparisons between data and concepts, concepts and concepts, abstracts core concepts from them, and establishes connections to form substantive theories. The tool used for data collection was a questionnaire, and exploratory factor analysis (EFA) was used to analyze the components of change factors in applied universities in Liaoning Province.

The research results show that there are five components in the reform of applied universities in Liaoning Province, including institutional isomorphism; institutional network; institutional culture; rational cognition; behavior subject; there are 9 methods for the reform of applied universities in Liaoning Province, including institutional innovation 1 4 items in the part of improving the management system; 1 item in giving play to the role of the market; 1 item in improving the social evaluation standard; 2 items in the subject system of innovative university organizations.

Keywords: Liaoning Province, applied universities, reform, new institutionalism

1. Introduction

Compared with research-oriented universities and teaching-research-oriented universities, applied universities are a new type of undergraduate education driven by the modernization of China's economic construction and the popularization of higher education. Research-oriented and teaching-research-oriented universities mainly train theoretical talents, vocational colleges cultivate skilled talents, and applied universities are in between. As an independent type of education, applied university has its own talent training objectives, training specifications, training process, training methods and evaluation standards.

The application-oriented university focuses on "application", in order to build a new subject direction, professional structure, and curriculum system that meets and adapt to the needs of economic and social development under the new higher education situation, and update teaching content, teaching links, teaching methods and teaching methods., comprehensively improve the teaching level, and cultivate high-quality applied talents with strong social adaptability and competitiveness.

At present, 21 undergraduate colleges and universities in Liaoning Province have been reformed to be application-oriented, and the annual training scale of application-oriented talents has reached about 120,000. In the future, Liaoning Province will set the key majors of college work to promote the transformation of colleges and universities to application-oriented, and promote the transformation and development of a large number of application-oriented undergraduate colleges and universities. It is estimated that by 2023, there will be 50 colleges and universities in the province to carry out the reform to application-oriented universities, accounting for nearly 80% of the total number of undergraduate colleges and universities in the province.

The relevant theories of applied university reform involve several theoretical systems such as university reform and new institutionalism. Related researches include (Xue Guoren & Yin Li, 1997; Li Jun, 2003; Wu Genzhou, 2006; Pan Maoyuan, 2007; Deng Yonghong, 2005; Mike Fulan, 2005; Zhou Guangli, 2009; Bruce. Johnstone, 2002; John L. Campbell, 2010; Yuan Zhenguo, 2016; Hu Jianhua, 2013; Liu Gonghui, 2008; Hu Tianyou, 2013) In addition, four applied universities are also studied in the literature. Dimensions (Zhang Jun & Xu Jianmei, 2002; Pan Liuyan, 2011; Liu Hongmei, 2012; Wu Qiaohui & Xing Peizheng, 2011 Yan Guangcai, 2000; Cheng Mianzhong, 2006; Liu Xiangbing, 2016; Clark, B. etal, 1992; Xia Xiayang, 1997; Xu Xiaozhou, 2008; Chen Jiagang, 2003; Vivien A. Schmidt, 2015)

With the continuous improvement of various supporting systems for the transformation of undergraduate colleges and universities into application-oriented universities and the establishment of a number of demonstration application-oriented universities in various places, more and more undergraduate universities in Liaoning Province will transform into application-oriented universities. From the current point of view, the transformation work has achieved initial results. How to support and continue to promote the construction of high-quality application-oriented universities in undergraduate universities in Liaoning Province; the development of this research provides the possibility for science to answer these two questions:

i. What are the factors for the transformation of applied universities in Liaoning Province?

ii. What is the method of reforming applied universities in Liaoning Province?

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 is 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 are no outliers, equidistant values, linear values, multivariate normal distribution, and orthogonality.

4. Research samples

According to the distribution and structural characteristics of colleges and universities in Liaoning Province, the respondents of this study are managers, professors, tutors and managers of 10 colleges and universities in Liaoning Province.

Table 1: Study sample

Demographic Variables	Classification	Frequency	Percentage
Types Of School	Liaoning University of Science and Technology	28	9.8
	Dalian University of Technology	34	11.8
	Liaoning University of Technology	28	9.8
	Shenyang Medical College	31	10.8
	Liaoning University of International Business and Economics	24	8.4
	Shenyang University	33	11.5
	Liaoning Institute of Science and Technology	23	8
	Shenyang Institute of Engineering and Technology	34	11.8
	Shenyang Institute of Technology	31	10.8
	Dalian Institute of Software and Information	21	7.3
Gender	Male	126	43.9
	Female	161	56.1
Age	Under 30	69	24
	30-39 years old	82	28.6
	40-49 years old	66	23
	Over 50 years old	70	24.4
Education Level	College	12	4.2
	Undergraduate	88	30.7
	Graduate and above	187	65.2
Working Years	1 year (inclusive) or less	49	17.1
	2-3 years	52	18.1
	4-5 years	61	21.3

Demographic Variables	Classification	Frequency	Percentage
	6-10 years	61	21.3
	10+ years	64	22.3

The scope of the questionnaire survey is mainly related to the relevant staff of 10 applied universities in Liaoning Province, of which 287 are valid questionnaires. In terms of school types, "Shenyang Institute of Technology" and "Dalian University of Technology" have the largest number of respondents, both of which are 34 people, accounting for 11.8%, followed by "Shenyang University" (33 people, 11.5%), in addition, "Shenyang Institute of Technology" and "Shenyang Medical College" both had 31 respondents, accounting for 10.8 %, "Liaoning University of Technology" and "Liaoning University of Science and Technology" had 28 respondents, accounting for 9.8%, followed by "Liaoning University of International Business and Economics" (24 people, 8.4%), "Liaoning University of Science and Technology" respectively. ” (23 people, 8%) and “Dalian Neusoft Institute of Information” (21 people, 7.3%); in terms of gender composition, there are 126 male respondents, accounting for 43.9%, and 161 female respondents. The proportion of respondents was 56.1%, and the male-to-female ratio was about 4:6. Female respondents were the main respondents; in terms of age composition, the proportion of respondents in the "30-39" age group was the highest at 28.6%, followed by "30-39". "Over 50 years old" (24.4%) and "under 30 years old" (24%), the last one is "40-49 years old" (23%), which is more in line with the overall situation of the current population and has a certain representativeness, so it can be It satisfies the objectivity of the sample survey; the educational background of the respondents ranges from “college” to “postgraduate and above”, and over 60% (65.2%) of the respondents have “postgraduate and above”, followed by “undergraduate” (30.7%), 4.2% of respondents with “college” education; in terms of working years, the proportion of respondents with “more than 10 years” working experience is the highest at 22.3%, followed by “4-5 years” and "6-10 years" accounted for 21.3%, and "2-3 years" accounted for the lowest proportion at 18.1%.

5. Data collection tools

Firstly, according to the diamond organization system model proposed by American organization theory expert Harold Levitt, a three-dimensional and four-element model of the sample university was constructed, and the reform of the sample university was analyzed, including the dimensions of task change (talent training and social service), Structural change

dimension (management system), technological change dimension (international school running), and then using questionnaires, the number of question items is 44 items. The rating scale for each item is strongly disagree, disagree, moderate, agree, and strongly agree. The KMO test result for the data collected from the study was 0.921. Kaiser and Rice studied the KMO (Kaiser Meyer Olkin sampling adequacy measure) to measure whether factor analysis techniques should be used for data suitability and concluded that if the KMO value 0.921 ≥ 0.8, which can be used for factor analysis, works well in the dataset. For reliability, Cronbach's Alpha of 0.964 ≥ 0.90 was used for analysis.

6. Data Analysis

Frequency analysis is used to study the distribution of categorical data, and select the frequency and percentage respectively;

First: first describe the basic situation of the research data;

Second: analyze each analysis item one by one, and focus on the options with a large proportion of selection;

Reliability test

Reliability is used to judge whether the scale can measure the variables in the study stably and reliably. The higher the reliability, the smaller the error.

The Cronbach's Alpha coefficient and the Cronbach's Alpha coefficient are often used in statistics to measure the reliability of the scale. Usually the value of Cronbach's alpha is between 0 and 1. If the coefficient does not exceed 0.6, it is generally considered that the internal consistency reliability is insufficient; when it reaches 0.7-0.8, it means that the scale has considerable reliability, and when it exceeds 0.8, it means that the scale reliability index is very good, and it can be considered that the reliability has passed the test. The reliability value is 0.964, which is greater than 0.9, indicating that the data is highly reliable and of high quality, which proves the authenticity and applicability of the survey results.

7. Discovery

Based on the existing domestic and foreign literature and sample university literature, this research combs and analyzes the measurement methods of key variables such as the transformation of applied universities in the existing literature, and redesigns the measurement items based on the actual situation of Liaoning applied universities. 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 formed questionnaire, the questionnaire consistency (IOC) test was carried out for experts in relevant fields in Liaoning Province, the questionnaire was revised, and the questionnaire was adjusted to 44 questions, forming the third draft of the questionnaire.

Reliability Test

In the reliability test, this study mainly uses the Cronbach's alpha coefficient, which is also known as the Cronbach's alpha coefficient, the internal reliability coefficient, the consistency coefficient, and the average value of the split-half reliability coefficient obtained by all possible item division methods of the scale. , is the most commonly used reliability coefficient.

Usually the value of Cronbach's alpha is between 0 and 1. If the coefficient does not exceed 0.6, it is generally considered that the internal consistency reliability is insufficient; when it reaches 0.7-0.8, it means that the scale has considerable reliability, and when it exceeds 0.8, it means that the scale reliability index is very good, and it can be considered that the reliability has passed the test.

Cronbach Coefficient	Cronbach's Coefficient Based on Normalization Items	Number Of Items
.964	.964	44

The reliability analysis of the sample data through spss23.0 shows that the overall reliability value is 0.964, which is greater than 0.9, indicating that the data has high reliability and high quality, which proves that the survey results are authentic and applicable. The scale part passed the reliability test.

Descriptive Statistics

Table 2: Descriptive statistics of data analysis on the transformation factors of application-oriented universities in Liaoning Province.

Item	Mean	Standard Deviation
Q1	4.17	1.127
Q2	4.20	1.127
Q3	4.18	1.118
Q4	4.15	1.178
Q5	4.18	1.117

Item	Mean	Standard Deviation
Q6	4.26	1.039
Q7	4.22	1.120
Q8	4.23	1.117
Q9	4.20	1.155
Q10	4.21	1.123
Q11	4.22	1.076
Q12	4.24	1.112
Q13	4.26	1.093
Q14	4.29	1.059
Q15	4.30	1.031
Q16	4.29	1.059
Q17	4.23	1.136
Q18	4.23	1.056
Q19	4.22	1.061
Q20	4.25	1.102
Q21	4.26	1.093
Q22	4.26	1.108
Q23	4.09	1.236
Q24	4.10	1.216
Q25	4.16	1.175
Q26	3.99	1.279
Q27	4.16	1.127
Q28	4.02	1.193
Q29	4.08	1.189
Q30	4.08	1.236
Q31	4.09	1.204
Q32	4.13	1.135
Q33	4.25	1.085
Q34	4.26	1.067
Q35	4.23	1.163
Q36	4.24	1.094
Q37	4.31	1.071

Item	Mean	Standard Deviation
Q38	4.17	1.174
Q39	4.24	1.098
Q40	4.22	1.132
Q41	4.32	1.062
Q42	4.28	1.077
Q43	4.26	1.125
Q44	4.25	1.149

As shown in Table 4.11 above, generally speaking, the mean (Avg) of the 44 items is in the range of 3.99-4.32, and the overall average is 4.2. It can be seen that the interviewed teachers are generally satisfied with the current situation of reform in their schools; The standard deviations (S.D.) of the items were distributed in the range of 1.031-1.279, and their overall standard deviation was 1.12. Among the 44 items, the average of item Q41 is the largest, which is 4.32, and its corresponding standard deviation is 1.062, which means that the interviewed teachers are relatively satisfied with the nationalization level of their schools and have perfect support for their schools. The situation of the organizations and institutions that run the school is highly recognized; and the average value of the item Q26 is the smallest, which is 3.99, and its corresponding standard deviation is 1.279. It can be seen that the interviewed teachers believe that the school is still lacking in scientific research-oriented social services. It can regularly provide convenient vocational training services for the society. In this regard, the school should take the initiative to closely link personnel training, scientific research and industrial development with the needs of social and economic development, and strengthen the cooperation between the school and the society, so that Research and practice promote each other.

Factor Analysis

Table 3: The items contained in the questionnaire are measured by KMO and Bartlett's Test of Sphericity, and the significance probability of its KMO value and Bartlett's statistical value.

KMO and Bartlett's test		
KMO Sampling Suitability Quantity		.921
Bartlett's test for sphericity	Chi-square last read	11497.421
	Degrees of freedom	946

	Salience	.000

According to the test results, it can be known that the statistical value of the Bartlett sphericity test² is 11497.421, and the significant probability is 0.000, which is less than 0.05, indicating that the variables are correlated, and the sample data is suitable for factor analysis. The KMO test is used to examine the partial correlation between variables. The value is between 0 and 1. The closer the KMO statistic is to 1, the stronger the partial correlation between variables and the better the effect of factor analysis. The KMO value of this study was 0.921, indicating that it was suitable for factor analysis.

Table 4: Factor analysis explained variance explained rate.

Element	Rotational Load Sum Of Squares		
	Total	Percent Variance	Cumulative %
1	8.051	18.298	18.298
2	7.575	17.216	35.514
3	7.280	16.545	52.059
4	6.315	14.353	66.412

In the process of factor analysis, the extraction method of principal component analysis is generally used, and four common factors are extracted in accordance with the extraction method with an eigenvalue greater than 1. The cumulative explained variance explanation rate is 66.412%, which is in line with the interpretation rate of more than 60%. Standard. The eigenvalue of factor 1 is 8.051, and the variance explained rate is 18.298%. The eigenvalue of factor 2 is 7.575, and the variance explained rate is 17.216%. The eigenvalue of factor 3 is 7.280, and the variance explained rate is 16.545%. The eigenvalue of factor 4 is 6.315, and the variance explained rate is 14.353%. The cumulative explained variance explanation rate is 66.412%. It shows that after all the items are aggregated into four factors, 66.412% of the information can be explained.

Table 5: To clarify the structure of each common factor, use the maximum variance method to perform orthogonal rotation of the index:

Item	Factor load			
	Factor 1	Factor 2	Factor 3	Factor 4
Q1		0.722		
Q2		0.714		
Q3		0.723		
Q4		0.745		
Q5		0.760		
Q6		0.711		
Q7		0.754		
Q8		0.739		
Q9		0.699		
Q10		0.736		
Q11		0.716		
Q12		0.749		
Q13			0.818	
Q14			0.791	
Q15			0.782	
Q16			0.780	
Q17			0.787	
Q18			0.830	
Q19			0.800	
Q20			0.769	
Q21			0.820	
Q22			0.790	
Q23				0.699
Q24				0.653
Q25				0.744
Q26				0.742
Q27				0.753
Q28				0.743

Item	Factor load			
	Factor 1	Factor 2	Factor 3	Factor 4
Q29				0.747
Q30				0.725
Q31				0.706
Q32				0.745
Q33	0.789			
Q34	0.764			
Q35	0.799			
Q36	0.813			
Q37	0.771			
Q38	0.749			
Q39	0.782			
Q40	0.755			
Q41	0.790			
Q42	0.778			
Q43	0.772			
Q44	0.777			

Extraction method: principal component analysis.

Rotation method: Kaiser standardized maximum variance method.

The rotation has converged after 6 iterations.

In order to further clarify the structure of each common factor, the maximum variance method is used to perform orthogonal rotation of the index:

According to the rotation component matrix, it can be concluded that the questionnaire is mainly a 4-factor structure, in which the first common factor has a total of 12 items related to Q33-Q44 and other items. A total of 12 items of the second common factor are related to items such as Q1-Q12. A total of 10 items of the third common factor are related to items such as Q13-Q22. The fourth common factor has a total of 10 items related to Q23-Q32 and other items.

Table 6: Factor extraction classification

Sort	Factor	Number Of Items	Factor Loadings
1	Factor 1	12	0.749-0.813
2	Factor 2	12	0.699-0.760
3	Factor 3	10	0.769-0.830
4	Factor 4	10	0.653-0.753

According to the factor extraction classification, it can be sorted according to the factor explanatory power, in which factor 1 includes 12 items, and its factor loading distribution is between 0.749-0.813. Factor 2 includes 12 items with factor loadings ranging from 0.699 to 0.760. Factor 3 includes 10 items, and its factor loadings are distributed between 0.769-0.830. Factor 4 includes 10 items with factor loadings ranging from 0.653 to 0.753. For 44 items included in all four factors, the factor loadings were distributed between 0.653-0.813.

Table 7: Factor 1 factor loading

Item	Describe	Factor Loadings	Sort
Q33	Most of the teachers in the school have the background of studying abroad.	0.789	4
Q34	The school conducts scientific research cooperation projects with international/Hong Kong, Macao and Taiwan.	0.764	10
Q35	The school will conduct directional cooperation with foreign schools to send students for exchanges.	0.799	2
Q36	There will be a certain proportion of teachers in the school who will move internationally.	0.813	1
Q37	The school's teaching has an international perspective and carries out bilingual classrooms.	0.771	9
Q38	The course will introduce international cutting-edge theories or knowledge to broaden students' horizons.	0.749	12
Q39	The characteristic projects carried out by the school have established cooperation with foreign universities or institutions.	0.782	5

Item	Describe	Factor Loadings	Sort
Q40	The school has formulated corresponding internationalization policies and strategies.	0.755	11
Q41	The school has a well-established organization and institution to support Internationalization of Running Schools.	0.790	3
Q42	Your school will offer majors or courses in cooperation with foreign institutions.	0.778	6
Q43	The school has a special budget and financial support for Internationalization of Running Schools.	0.772	8
Q44	The school will regularly carry out scientific research cooperation or achievement exchanges with foreign.	0.777	7

According to the statistical results of factor 1, it can be known that factor 1 includes 12 items, its maximum eigenvalue is 8.051, and the variance explanation rate is 18.298%. The explanatory power ranks first, and its factor loadings are distributed between 0.749-0.813. Among them, the largest factor load is "there will be a certain proportion of teachers in the school that will flow internationally.", its factor load reaches 0.813, and the smallest one is "My course will introduce international frontier theories or knowledge.", to broaden the horizons of students.", its factor loading is 0.749, according to the meaning of the title, it can be known that the first public factor is the international school-running factor.

Table 8: Factor 2 factor loading

Item	Describe	Factor Loadings	Sort
Q1	The talent training reform of the school is carried out in line with the actual needs of the school's talent training.	0.722	8
Q2	The school has a clear teaching philosophy of talent training reform and corresponding teaching goals.	0.714	10
Q3	The talent training reform model of the school adopts a long-term mechanism of top-down and bottom-up	0.723	7

Item	Describe	Factor Loadings	Sort
	interoperability, and fully listens to the opinions of faculty members.		
Q4	In order to ensure that the talent training reform model is put into practice and plays a role, the school has implemented a talent training reform supervision mechanism.	0.745	4
Q5	The reformed talent training concept and training objectives will be fully integrated into the classroom.	0.760	1
Q6	The school will provide special training and guidance for teachers in personnel training.	0.711	11
Q7	In order to give students the opportunity to choose, the school has set up a variety of diversion methods such as transferring majors and double degrees.	0.754	2
Q8	Lectures for students will focus on multi-disciplinary knowledge and relevant content at the forefront of professional development.	0.739	5
Q9	The school pays attention to the cultivation of talents with interdisciplinary ability.	0.699	12
Q10	Students will be encouraged to actively participate in academic competitions, innovative projects and other competitions to cultivate students' comprehensive ability.	0.736	6
Q11	The school advocates the curriculum system model of "integrating knowledge imparting, cultivating ability and improving quality".	0.716	9
Q12	The talent training reform of the school is carried out in line with the actual needs of the school's talent training.	0.749	3

According to the statistical results of factor 2, it can be known that factor 2 includes 12 items, its maximum eigenvalue is 7.575, and the variance explanation rate is 17.216%. The

explanatory power came second, with factor loadings ranging from 0.699-0.760. Among them, the largest factor load is "I will fully integrate the reformed talent training concept and training goals into the classroom.", its factor load reaches 0.760, and the smallest one is "My school focuses on cross-disciplinary training." Disciplinary ability is in line with the cultivation of talents.", its factor load is 0.699, according to the meaning of the title, it can be known that the second common factor is the talent cultivation factor.

Table 9: Factor 3 factor loading

Item	Describe	Factor Loadings	Sort
Q13	Under the correct leadership of the government, the school has full autonomy in discourse.	0.818	3
Q14	The school has a sound academic committee, academic committee, school committee and other institutional settings to ensure teachers' right to participate in the reform.	0.791	5
Q15	The school where the school is based on the premise of the autonomy of college management to stimulate secondary colleges and teachers to actively strengthen the reform of application-oriented universities.	0.782	8
Q16	The school's application-oriented school-running goal reflects the application-oriented organizational form in the school.	0.780	9
Q17	The school has a sound institutional culture related to the transformation of application-oriented universities.	0.787	7
Q18	The school has a complete application-oriented university decision-making management system.	0.830	1
Q19	The school has a complete application-oriented university reform effect evaluation mechanism and its evaluation indicators.	0.800	4

Item	Describe	Factor Loadings	Sort
Q20	The major or discipline has a relatively complete reform path and method, and guide teachers to implement the reform.	0.769	10
Q21	The school has a sound academic activity and its performance evaluation and incentive system.	0.820	2
Q22	The school has a sound and complete professional title evaluation and promotion mechanism.	0.790	6

According to the statistical results of factor 3, it can be known that factor 3 includes 10 items, its maximum eigenvalue is 7.280, and the variance explanation rate is 16.545%. The explanatory power ranks third, with factor loadings ranging from 0.769-0.830. Among them, the largest factor load is "The school has a perfect application-oriented university decision-making management system." Its factor load reaches 0.830, and the smallest one is "My major or discipline has a relatively complete reform path and method. Instruct the teacher to implement the reform.", its factor loading is 0.769, according to the meaning of the title, it can be known that the third common factor is the management system factor.

Table 10: Factor 4 factor loading

Item	Describe	Factor Loadings	Sort
Q23	The schools where they are located often carry out scientific research or technical technical services to provide help and support to the locality.	0.699	9
Q24	The school continues to cultivate scientific research and skilled talents for the society.	0.653	10
Q25	Your school provides valuable technical services to the district or business.	0.744	4
Q26	The school will provide vocational training services for the society on a regular basis.	0.742	6

Q27	The school has built a new model of school-enterprise cooperation to accelerate the transformation of scientific and technological achievements.	0.753	1
Q28	The school where it is located is making continuous efforts to strengthen the "interactive service mechanism and seek the combination of social service and economic development".	0.743	5
Q29	The school has a perfect platform for scientific research to serve the society.	0.747	2
Q30	The school where the school is located has established a cross-school, cross-disciplinary, and cross-enterprise research institution, focusing on the research topics that the government is most concerned about, the most urgent for enterprises, and the most needed by the people.	0.725	7
Q31	In the classroom, the scientific research service will be highlighted, and the students' awareness of improving their scientific research ability and serving the locality will be strengthened.	0.706	8
Q32	In the classroom, great attention is paid to the cultivation of students' entrepreneurship and innovation ability.	0.745	3

According to the statistical results of factor 4, it can be known that factor 4 includes 10 items, its maximum eigenvalue is 6.315, and the variance explanation rate is 14.353%. The explanatory power ranks last, and its factor loadings are distributed between 0.653-0.753. Among them, the largest factor load is "the school has built a new model of school-enterprise cooperation to speed up the transformation of scientific and technological achievements.", its factor load reached 0.753, and the smallest one is "the school continues to cultivate scientific research and skills for the society." type talents.", its factor loading is 0.653, according to the meaning of the title, it can be known that the fourth public factor is the scientific research-oriented social service factor.

To sum up the above:

It can be known that the first public factor is the international school-running factor; the second public factor is the talent training factor; the third public factor is the management system factor; the fourth public factor is the scientific research-oriented social service factor.

8. Results, Conclusions and Recommendations

This paper discusses the factors and methods of reform of applied universities in Liaoning Province. The research shows that: the factors for the transformation of applied universities in Liaoning Province

1. Dynamic factor: institutional isomorphism. Neo-institutionalist isomorphism theory emphasizes the influence of environment on organizational change, "an important factor that organizations must take into account is the existence of other organizations" (Paul J. DiMaggio, Walter W. Powell, 2007 (1): 262, 263.265), organizations must find ways to comply with the pressures of these environments. The analysis of the influencing factors of the reform of the applied universities in Liaoning Province shows that the isomorphism of the system is the initial driving force of the reform, and it is in the main position among the factors affecting the reform of the applied universities in Liaoning Province.

2. Constraints:

The institutional network is the direct institutional environment in which the school runs. Liaoning Province has built an institutional network that is relatively beneficial to schools' application-oriented education, not only because the government's external management systems and mechanisms have responded positively, but also the cooperation between schools and some important enterprises is relatively smooth.

Institutional culture refers to the institutional environment determined by the school's system, mechanism, policy, and regulations, which has the role of guiding, constraining and stereotyping the thinking, words and deeds, and habits of life and behavior of teachers and students (Fan Yuejin, 2004 (3): 5).

The actors that affect the running of a university include both on-campus and off-campus subjects. On-campus subjects include principals, teachers, and students. Off-campus subjects include enterprises and government officials. In some cases, compared to enterprises and governments, schools can also be regarded as an actor. “If teachers’ educational and teaching activities are not transformed, the transformation of colleges and universities is just empty talk” (Zou Qi, 2017 (3): 167-171). Therefore, do teachers agree with applied universities

in their ideological concepts, and how can they apply the teaching methods and teaching models for the cultivation of applied talents? All directly affect the quality of applied talents training. The same is true for students. The quality of students' sources, comprehensive quality, innovation ability and practical ability will naturally have an impact on the cultivation of applied talents.

In this context, the transformation methods of Liaoning applied universities are formed: 1. Institutional innovation; 2. Improve management system; 3. Play market role; 4. Improve social evaluation standards; 5. Innovate the subject system of university organizations.

Research Outlook. Compared with applied universities in other countries, such as the "New Universities" in the United Kingdom, the University of Applied Sciences in Germany, and the land-grant colleges in the United States, as a type of higher education, the applied university is still a relatively new concept in China. In particular, the construction of applied universities in China is a "top-down" pulling process, which is the result of the government's macro policy. In the process of specific practice, the construction of applied universities in Liaoning Province still faces many difficulties, and there are still many development problems that need to be studied urgently. For example, China has a vast territory and great regional differences. What are the regional differences in strengthening applied universities in different regions, and what strategies should be adopted accordingly? As a new type of higher education, what is the difference between Chinese applied universities and research universities? What are its characteristics? What are the setting standards and evaluation standards of applied universities? How should the relationship with the higher education system, the relationship with the government, and the relationship with the scientific and technological system and the industrial system be constructed? need to be further deepened.

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