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Article

Construction of Traditional Architectural Culture Inheritance and Innovative Design Talent Cultivation System Empowered by Digital Technology

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Abstract: As an important part of Chinese civilization, traditional architectural culture carries profound historical heritage and cultural connotation. In the context of accelerated urbanization, traditional architectural culture faces the double challenges of inheritance fault and innovation development. Digital technology provides new development opportunities for traditional architectural culture inheritance and innovative design talent training. This study constructed a model of influencing factors on talent cultivation quality containing four dimensions: student body, university management, social environment, and family factors, and used PLS-SEM structural equation modeling analysis to conduct an empirical study by distributing 340 questionnaires and recovering 317 valid questionnaires. The results show that the overall Cronbach's α value of the questionnaire is 0.9327, the KMO value is 0.8957, and the cumulative variance explained rate of the four factors is 62.59%; the correlation analysis shows that the correlation coefficients of the student body, university management, social environment and family factors and talent cultivation are 0.7839, 0.8047, 0.7944 and 0.8269, respectively, which have reached a 0.001 significant level; structural equation model analysis found that the total effect of the student body on the social environment is 0.4029, and the coefficient of direct influence of the social environment on talent cultivation is 0.9454. The study finally constructed the disciplinary construction goal of "optimizing structure, strengthening connotation, deepening education reform, and catalyzing results" and the practical teaching system of "four rounds" practical training driving method, which provides a theoretical basis for the cultivation of talents of traditional architectural culture inheritance and innovation design and provides a theoretical basis for the training of talents of traditional architectural culture inheritance and innovation design. It provides theoretical basis and practical guidance for the cultivation of traditional architectural culture inheritance and innovative design talents.

Keywords: Digital technology, traditional architectural cultural heritage, innovative design, talent training, PLS-SEM, structural equation modeling

1. Introduction

Traditional architectural culture is the spiritual memory and cultural heritage of a country and a nation, which are intertwined and interact with each other, and together they constitute a unique cultural landscape, showing an atmosphere of long history and deep culture [1-4]. These traditional architectural cultures, with their exquisite craftsmanship and beautiful design, have attracted countless

people to stop and watch [5]. However, in contemporary society, the collision between traditional architectural culture and modern society has become a hot topic [6]. With the continuous development of science and technology and social progress traditional architectural culture has been gradually marginalized in modern society, and faces the crisis of loss and destruction [7-8]. It is in this process of collision, people began to pay more attention to the inheritance and protection of traditional architectural culture [9-10]. In the process of inheritance and protection, it is impossible to leave the talents with innovative design ability, so the importance of talent training system is self-evident [11-12].

Nowadays, digital technology has entered our life silently, and even changed the face of the whole construction industry [13]. Traditional architectural design is mainly dominated by manual labor, which is inefficient, of low quality, and has large labor costs, and the application of digital technology has brought the possibility of innovative design talent training, as well as the new development of traditional architectural culture [14-17]. With the support of digital technology, by strengthening the cooperation between schools and enterprises, strengthening the technical support of government departments, and constructing the whole process of digitalization of talent cultivation, it is of great significance for the cultivation of innovative design talents, which is conducive to the inheritance and protection of traditional architectural culture in the new period [18-21].

As an important carrier in the development of human civilization, traditional architectural culture not only embodies the level of architectural technology and aesthetic pursuit in different historical periods, but also carries profound cultural connotation and national spirit. Under the impact of the wave of globalization, many traditional architectural cultures with unique values are facing unprecedented challenges, and how to realize innovative development on the basis of preservation and inheritance has become an important issue that needs to be solved in the field of contemporary architectural education. The inheritance of traditional architectural culture not only requires the protection of the material form of historical buildings, but also requires in-depth excavation and modern interpretation of the cultural spirit and technical wisdom contained therein. In this process, talent training plays a crucial role, and high-quality professionals are the fundamental guarantee for the inheritance and innovation of traditional architectural culture. At present, there are still many deficiencies in the training of talents in traditional architectural culture in higher education, including insufficiently perfect curriculum system, weak practical teaching links, and insufficiently close integration of industry, academia and research, etc. The rapid development of digital technology has made it possible to solve these problems. The rapid development of digital technology provides a new opportunity to solve these problems. Through virtual reality, augmented reality, 3D modeling and other technical means, the spatial characteristics and cultural connotations of traditional architecture can be better demonstrated, and the teaching effect and learning experience can be enhanced.

Based on the above background, this study adopts a quantitative research method to construct a theoretical model of the factors influencing the quality of traditional architectural culture inheritance and innovative design talent cultivation, and empirically analyzes it by using PLS-SEM structural equation model. Firstly, through literature research and expert interviews, the core elements affecting the quality of talent cultivation are identified, and a conceptual model containing four dimensions, namely, student body, university management, social environment and family factors, is established. Secondly, the questionnaire was designed, relevant data were collected, and SPSS and AMOS software were used to conduct reliability and validity test, exploratory factor analysis and structural equation modeling analysis. Finally, based on the results of empirical research, the specific strategies and implementation paths for the construction of traditional architectural culture inheritance and innovative design talent cultivation system are proposed to provide theoretical guidance and decision-making references for relevant educational practices.

2. Traditional architectural culture inheritance and innovative design talent training system construction

2.1. Factors affecting the quality of talent training

2.1.1. Mechanism analysis of factors affecting the quality of talent training

As an important internal factor affecting the quality of talent training, the student body plays a fundamental role in determining the quality of training. In this paper, we study the size of the factors affecting the student body in the quality of talent training, mainly from the students in the education can be continuously improved in several aspects, through the reference to previous research theories, we believe that whether a student can stand out in education, with its own self-management ability,

social skills, practical ability and the spirit of exploration is inseparable. As colleges and universities are the important main body of talent cultivation, the influence of college management on the quality of talent cultivation is extremely critical. The learning atmosphere of the school will also form a potential impact on students, and the paper mainly analyzes the influence of school orientation, faculty strength, teaching facilities and learning atmosphere on the quality of talent cultivation in the management of colleges and universities.

Cultural exchange, economic level and employment situation in the social environment will affect the quality of talent cultivation, and family education has unparalleled advantages. Practice shows that students who have more hobbies are more practical and innovative than those who lack hobbies, and more specialties not only help the exercise of thinking, but also beneficial to the long-term development of students. College management can only influence the development of students on the basis of their own concepts, therefore, the influence of family factors on the quality of talent training can not be ignored.

2.1.2. Establishment of the model of factors influencing the quality of talent training

Through reading a large amount of literature, we select the very representative content as the construction index of the research model of this paper, starting from the four dimensions of the student body, university management, social environment and family factors, so as to construct a model of the influencing factors of the quality of talent cultivation. At the same time, four representative and easy-to-measure indicators are selected from each dimension to form the model scale. The model of influencing factors of talent cultivation quality is shown in Figure 1; the influencing factors of talent cultivation quality are shown in Table 1.

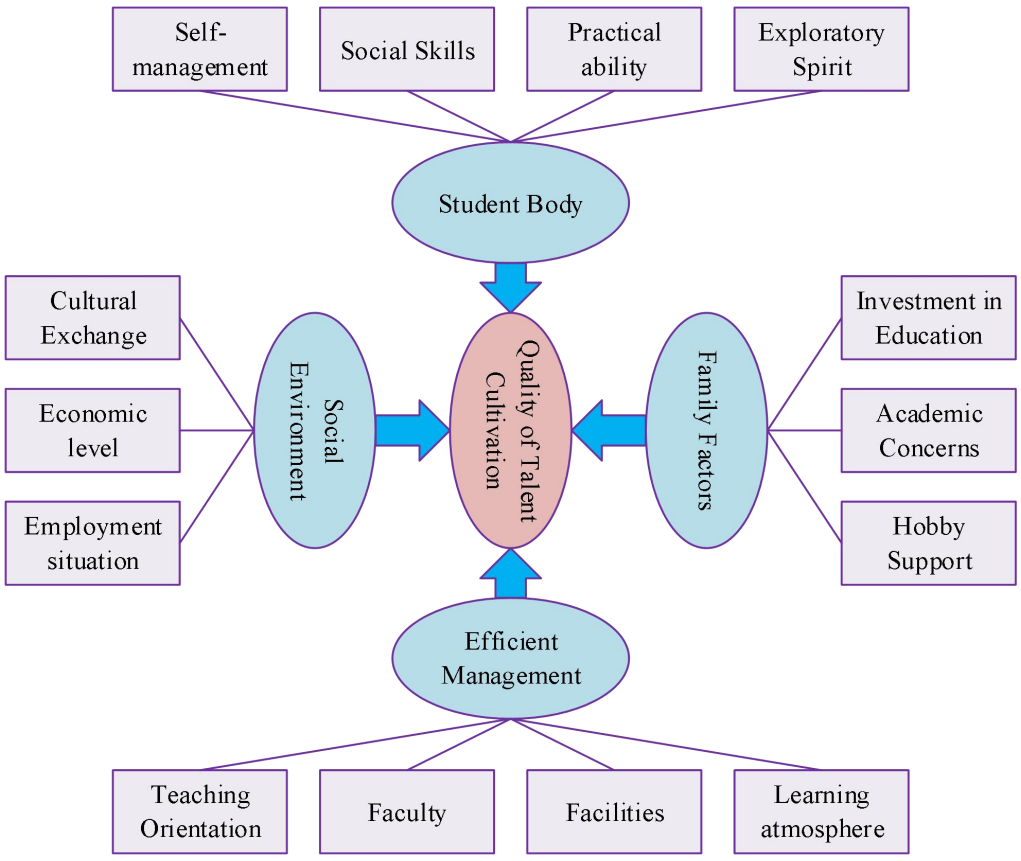

Figure 1. The quality influence factor model of talent cultivation

Table 1. The quality influence factors of talent cultivation

Research object	Potential variable	Observed variable	Short for observation variables
The quality influence factors of the cultivation of traditional construction culture	A:Student theme	Autonomous management	A1
		Social ability	A2
		Practical ability	A3
		Exploration spirit	A4
	B:University management	Teaching orientation	B1
		Faculty	B2
		Teaching facilities	B3
		Learning atmosphere	B4
	C:Social environment	Cultural exchange	C1
		Economic level	C2
		Employment situation	C3
	D:Family factor	Education investment	D1
		Academic attention	D2
		Love support	D3

2.2. PLS-SEM modeling process

2.2.1. SEM model

SEM is one of the more widely used multivariate statistical tools at present, which involves two main classifications: covariance-based equation modeling (CB-SEM), and variance-based equation modeling, also known as equation modeling in the form of principal components (SEM). Partial Least Squares (PLS) [22] is a commonly used method for the second type of model, which is customarily named PLS-SEM in the academic world. Compared to the CB-SEM model, the PLS-SEM model has the following five advantages:

(1) The partial least squares method can directly use the source data to construct the model to complete the relevant calculations; while the covariance method has relatively high requirements, the data must satisfy the trend of normal distribution, and if it fails to meet the requirements of normal distribution, the objectivity and authenticity of the estimation results cannot be guaranteed.

(2) The partial least squares method focuses on latent variable scores, such as the satisfaction index, while the covariance method cannot obtain latent variable scores to find satisfaction through the PLS method.

(3) The constructs assumed by the partial least squares method can include formative indicators.

(4) The partial least squares method is used for small samples, and when the amount of data is small, the traditional multiple regression method may not be able to obtain a stable solution, whereas the PLS method can effectively deal with such problems.

(5) Favors of covariance methods usually focus on the biased nature of partial least squares methods and offer different points of view against this. Although there is some bias in this method in a normally distributed environment, the impact of this bias is much less than the impact of incorrect errors.

2.2.2. PLS-SEM build types

PLS-SEM [23-24] has two types of conformations, reflective and formative. Reflective indicators are highly correlated and all factors are important components of the conformation. Formative type indicators of various factors are also important components that together form the mean of the conformation, which cannot be exchanged with each other, and in principle the more the better. As the sample data in this paper are surveyed by online and offline questionnaires, it is not possible to ensure that the data are normally distributed, and in order to ensure the accuracy of the results, the article decides to use the PLS-SEM model, which is more implementable, for the subsequent empirical research after various considerations and comprehensive analyses.

2.2.3. PLS-SEM Calculation Process and Methods

(1) SEM model calculation steps

The SEM model consists of two parts: the measurement model, which mainly reveals the composition of the latent variables; and the structural model, which mainly describes the mechanism of action and the degree of influence among the latent variables.

ξ as an explanatory variable, η as an outcome variable, and η can be explained by other

factors, so it is called endogenous latent variable. ξ as a variable that affects η is then called an exogenous latent variable. Latent and observed variables put together are called constructs. To wit:

$$x = \Lambda_x \xi + \delta \tag{1}$$

$$y = \Lambda_y \eta + \varepsilon \tag{2}$$

where x = vector of exogenously observed variables;

y = vector of endogenous observed variables;

The factor loading matrix of $\Lambda_x = x$ on ξ;

Factor loading matrix of $\Lambda_y = y$ on η;

δ, ε = measurement error vector.

The following equation is a typical structural model of SEM, which visualizes the interaction between ξ and η. To wit:

$$\eta = \beta_\eta + \Gamma \xi + \zeta \tag{3}$$

where $\xi =$ exogenous vector of latent variables;

$\eta =$ vector of endogenous latent variables;

$\beta =$ the regression path coefficient of the effect between different η;

Regression path coefficients for the effect of $\Gamma = \xi$ on η;

$\zeta =$ model measurement residuals.

Combine the equations of the measurement model with the equations of the structural model to find the best solution, which is the structural equation model.

(2) PLS-SEM model calculation steps

In the parameter estimation of PLS, the relationship between observed variables and latent variables is called the external model, while the relationship between latent variables and potential variables is called the internal model. In the external model part, since different variables have different causal relationships, PLS proposes two distinct assumptions, one is that the variation in the observed variables depends entirely on the latent variables, which is known as the reflective model. The second is that the variation in the latent variables depends entirely on the observed variables, i.e.:

$$\xi = \Pi x + v \tag{4}$$

where $\xi =$ exogenous latent variables;

x = vector of exogenous observed variables;

$\Pi = x$ to ξ weight matrix;

$v =$ vector of measurement errors.

The implementation process is as follows:

Normalize the values of the observed variables (ξ for exogenous latent variables, η for endogenous latent variables). Then:

$$x_{ij} = \frac{x_{ij} - \overline{x_j}}{\sqrt{varx_j}} \tag{5}$$

$$y_{ij} = \frac{y_{ij} - \overline{y_j}}{\sqrt{vary_j}} \tag{6}$$

Where, $i =$ the sample size of observations;

$j =$ the number of observed variables;

$\overline{x_j} = \xi$ the mean of the potential variable j the observed variable;

$\overline{y_j} = \eta$ mean of the potential variable j observation variable;

$varx_j = \xi$ Variance of the potential variable j observation variable;

$vary_j = \eta$ the variance of the potential variable j the observed variable.

Principal component analysis using regression:

$$t_1 = E_0 w_1 \tag{7}$$

$$u_1 = F_0 c_1 \tag{8}$$

Where $t_1 = \xi$ extracted principal components;

$u_1 = \eta$ extracted principal components;

E_0 = the matrix after standardization of the observation variable x_{ij};

F_0 = matrix after standardization of the observation variable y_{ij};

w_1 = unit vector, first axis of E_0, $\|w_1\| = 1$;

u_1 = unit vector, first axis of F_0, $\|u_1\| = 1$.

To extract accurate and valid principal components, the following requirements must be followed: First maximize the information covered in the observed variables:

$$\text{var}(t_1) \to \max \tag{9}$$

$$\text{var}(u_1) \to \max \tag{10}$$

Secondly the correlation between the principal components needs to be at the highest level:

$$r(t_1, u_1) \to \max \tag{11}$$

Performing the above two processes repeatedly, the m th round extracts the components of the residual information after ξ has been interpreted by t_1, and the extraction can be stopped as long as the marginal contribution of component t_m is not significant.

Since the main objective of parameter evaluation is to maximize the residual impact, the fitted values of the model for the two sets of observed variables should maximize the explanation of the relationship between ξ and η.

3. Analysis of the effect of traditional architectural culture inheritance and innovative design talent training

3.1. Empirical studies

3.1.1. Questionnaire design

The distribution of the sample's demographic attributes reflects the sample profile of the questionnaire: 53% and 47% were male and female, respectively, and their ages ranged from 16 to 45 years. A total of 340 questionnaires were distributed and 317 were returned, with a recovery rate of 93.2%. The educational level of the people who filled in the questionnaire was in the two stages of, postgraduate students, the number of people is higher, 126 people. The questionnaire items were in the form of Likert 5 scale. It is indicated from 1-very unimportant to 5-very important. The composition of the people surveyed largely reflects the structure of the people in the cultural heritage of traditional architecture and has a good representativeness, thus ensuring the authenticity and reliability of the survey results.

3.1.2. Basic situation analysis

The descriptive statistical analysis of this paper utilizes SPSS to analyze the statistical quantities such as mean, extreme value and standard deviation of the samples, and the results of the descriptive statistical analysis are shown in Table 2. It can be seen that there is a difference between the means of each test item. The quality dimension with the highest mean score is the dimension of academic concern, with a score of 4.85; the quality dimension with the lowest score is teaching orientation, with a score of 3.36. It can be seen that the quality dimensions initially set in this paper's questionnaire and their measurement indexes are of high importance, i.e., these 14 test items have a high representativeness in reflecting the qualities that should be possessed by technological innovators in the inheritance of traditional architectural culture. The size of the standard deviation represents the degree of unanimity of opinion among the respondents, and it can be seen that the standard deviation of each question is below 0.65, and the standard deviation of the 14 indexes varies less, all between 0.5953-0.6022, which indicates that the differences in the opinions of different people on the

importance of the individual qualities are relatively small.

Table 2. Descriptive statistical analysis results

Item	Mean	Standard deviation
A1	4.2201	0.6009
A2	4.1548	0.5979
A3	4.2969	0.6
A4	4.2813	0.5991
B1	3.3574	0.602
B2	4.3617	0.5996
B3	4.6097	0.6021
B4	4.3394	0.6021
C1	4.4742	0.5977
C2	4.028	0.5953
C3	4.6788	0.5983
D1	3.882	0.6006
D2	4.85	0.6013
D3	4.3571	0.5979

3.1.3. Analysis of the reliability and validity of the questionnaire

In order to improve the quality of the questionnaire and ensure the research conclusions of this paper, the reliability and validity of the questionnaire must be analyzed. The value of the questionnaire Cronbach's obtained after the statistical analysis software processing is 0.9327, which is higher than 0.9, indicating that the reliability of the questionnaire for the training of technological innovation talents in traditional architectural culture inheritance used in this study reaches the required level, and that the questionnaire has a good reliability.

In the process of designing the questionnaire for cultivation of technological innovation talents in traditional architectural cultural heritage, the opinions of researchers in traditional architectural industry were consulted, the questionnaire items were analyzed and finalized, and local innovations were made through repeated consultations with the tutors, which is strictly in line with the relevant requirements of validity. Structural validity refers to the extent to which a questionnaire measures the theoretical structure and qualities to be measured, and it is the structural validity of the scale or the whole questionnaire that is measured by using factor analysis, therefore, this paper mainly adopts factor analysis to test the structural validity of the questionnaire.

3.1.4. Exploratory factor analysis

The KMO and Bartlett spherical test were conducted on the questionnaire of technological innovation talent cultivation, and the statistical results yielded a KMO value of 0.8957, an approximate chi-square of 456.33 in the Bartlett spherical test, and a significance probability of Sig.=0.000, with the values reaching the standard, which indicates that the data obtained from the questionnaire are suitable for factor analysis.

In order to avoid large fluctuations in the results of each factor analysis, the 14 questionnaire items retained were then subjected to factor analysis and reliability test, and the KMO value of the remaining questionnaire measurement items was 0.8826, and the value of Bartlett's spherical test was 354.178, with the probability of significance Sig.=0.000, and the KMO and Bartlett values met the criteria for factor analysis.

The total variance explained is shown in Table 3; the rotated component matrix is shown in Table 4. It can be seen that the common degree and factor loading coefficients of the 14 test items are above 0.65, and there is a better differentiation between the individual measurement items on different factors, which indicates that the retained items have met the above standards, and that the questionnaire has had a good structural validity. In this paper, the factors are extracted by principal components, and the factors are extracted according to the method of eigenvalue greater than 1 and orthogonal rotation variance maximization. It can be seen that the eigenvalues of the first four factors are greater than 1, so the following four factors are obtained. The first factor contains four questions with a variance explained rate of 29%; the second factor contains four questions with a variance explained rate of 11.25%; the third factor contains three questions with a variance explained rate of 9.64%; the fourth factor contains three questions with a variance explained rate of 6.29%, and the cumulative variance explained rate of the four factors is 62.59%. Finally, the reliability test was conducted again for the remaining items, and the results showed that the reliability coefficients of the four dimensions of

innovation consciousness, personality traits, knowledge skills and innovation ability were all above 0.6951, and the overall reliability of the questionnaire was 0.8527.

According to the rotated component matrix, the four factors obtained are named: the first factor has four items, mainly including autonomous management, social ability, practical ability and exploratory spirit, which is from the technological innovation talents, so this factor is named as the student body. There are 4 items in the second factor, mainly teaching orientation, faculty strength, teaching facilities and learning atmosphere, because this factor involves behavioral characteristics at the management level, so this factor is named as efficient management. There are 3 question items in the third factor: mainly including cultural exchange, economic level and employment situation, so this dimension is named as social environment. There are 3 items in the fourth factor, which are from the perspectives of educational investment, academic concern and hobby support, so this factor is named as family factors.

Table 3. The total variance of the explanation

Constituent	Initial eigenvalue			Rotate the squares and load		
	Tot	Variance %	Cumulative %	Tot	Variance %	Cumulative %
1	4.0598	29.00	29.00	2.6796	19.14	19.14
2	1.7778	12.70	41.70	2.1583	15.42	34.56
3	1.5754	11.25	52.95	2.0753	14.82	49.38
4	1.349	9.64	62.59	1.8489	13.21	62.59
5	0.8806	6.29	68.88			
6	0.815	5.82	74.70			
7	0.6881	4.92	79.61			
8	0.5628	4.02	83.63			
9	0.5495	3.93	87.56			
10	0.4951	3.54	91.09			
11	0.4705	3.36	94.45			
12	0.3935	2.81	97.27			
13	0.3135	2.24	99.50			
14	0.0694	0.50	100.00			

Table 4. The component matrix after rotation

Survey content	Factor dimension				Common degree
	F1	F2	F3	F4	
A1	0.7862				0.8603
A2	0.6951				0.8994
A3	0.7593				0.8232
A4	0.7042				0.8236
B1		0.8364			0.7762
B2		0.7424			0.8218
B3		0.7532			0.7676
B4		0.7375			0.9009
C1			0.6963		0.8842
C2			0.7659		0.8965
C3			0.7847		0.8746
D1				0.8071	0.8269
D2				0.6896	0.8156
D3				0.8172	0.8755

3.2. Correlation analysis

After confirming the structure of the dimensions and the corresponding question items based on the validity and reliability analyses, the mean of the question item scores for each dimension was calculated as the score for the corresponding dimension, and then correlation analyses were performed. Correlation analysis usually investigates the correlation between variables, and the value of the correlation coefficient r is between [-1,1]. The results of the correlation analysis are shown in Table 5, and the correlation is significant at a confidence level (two-sided) of 0.001. As can be seen from the table, the correlation coefficients of student body, university management, social environment and family factors are 0.7839, 0.8047, 0.7944 and 0.8269, respectively, and the P-values reach the significant level of 0.001, indicating that there is a significant positive correlation between the student body, university management, social environment and family factors, and the inheritance of traditional

architectural culture and cultivation of innovative talents.

Table 5. Results of correlation analysis

Project	A: Student theme	B: University management	C: Social environment	D: Family factor	Cultural heritage and innovation training
A:Student theme	1				
B:University management	0.5175	1			
C:Social environment	0.5345	0.7724	1		
D:Family factor	0.6425	0.8015	0.7821	1	
Cultural heritage and innovation training	0.7839	0.8047	0.7944	0.8269	1

3.3. Critical path for talent development

3.3.1. Results of structural equation modeling analysis

Preliminary structural equation modeling of China's science and technology innovation talent cultivation was established using AMOS 17.0. The preliminary structural equation model contains 4 latent variables and 14 observed variables. To ensure the scientific validity of the model, 14 residual terms are introduced, and the correlation coefficients between the residual terms and the observed variables are 1. The results obtained from the structural equation model are: there are 4 paths that are significant at the 5% level, which are valid paths. The initial fit index $\chi^2 / df = 4.9003 < 5$, but the root mean square of the approximation error is 0.007, which is less than 0.05, and the model fit is better, with the fit indexes $NFI = 0.9301$, $TLI = 0.9523$, $CFI = 0.9727$, and all three of which meet the minimum criteria for the model to be valid ($NFI > 0.90$, $TLI > 0.9$, $CFI > 0.9$).

3.3.2. Model Interpretation and Effects Analysis

The effects of the latent variables in the structural equation modeling are shown in Table 6. It can be seen that the student body has a significant effect on university management and social environment. The student body has a direct positive effect on college management, with an impact coefficient of 0.2026 ($P < 0.05$), and at the same time, it has not only a direct positive effect on the social environment, but also an indirect effect, with impact coefficients of 0.2009 and 0.202 respectively, and the total effect is 0.4029. It shows that the student body has a significant impact on both college management and the social environment, and the effect on the social environment is more significant, with direct influence dominating. Therefore, more attention should be paid to the fundamental position of student subjects in educational inputs, and the efficiency of the social environment should be promoted by increasing the attention to student subjects. Significant at 5% level. It indicates that college management mainly affects talent cultivation, and the degree of influence on talent cultivation is much larger than the influence on family factors. It has an indirect effect on talent development mainly by influencing talent development.

The social environment has a significant positive direct effect on talent development, with an impact coefficient of 0.9454, significant at the 5% level. The degree of positive influence is the same as that of university management, but does not have an indirect influence. There is an indirect effect on talent development with an impact coefficient of 0.4479 which is significant at 5% level. It indicates that social environment directly affects talent cultivation, but the degree of influence is less than university management. Talent development has a direct positive and significant effect on talent development efficiency. The impact coefficient is 0.4003, which is significant at 5% level.

Table 6. The effect of the latent variables in the structural equation model

Classification	Effect	A: Student theme	B: University management	C: Social environment	D: Family factor
B: University management	Direct effect	0.2026			
	Indirect effect				
	Total effect	0.2026			
C: Social environment	Direct effect	0.2009	0.3019		
	Indirect effect	0.202			
	Total effect	0.4029	0.3019		
D: Family factor	Direct effect		0.3019	0.9454	
	Indirect effect				
	Total effect		0.3019	0.9454	
Talent training efficiency	Direct effect			0.4479	0.4003
	Indirect effect		0.2969		
	Total effect		0.2969	0.4479	0.4003

3.4. Construction of Talent Cultivation System for Traditional Architectural Culture Inheritance

3.4.1. Promoting high-quality development of disciplines

Integrating course politics into the discipline construction system is an important way and method to form the internal cohesion of the discipline, which is of great significance for promoting the growth of the teacher team, creating a good academic atmosphere, and cultivating the political quality and ideological awareness of the teachers. In recent years, according to the requirements of the "Reform Plan for Adjustment and Optimization of Discipline and Specialty Settings in General Higher Education", colleges and universities have combined the characteristics of traditional architectural culture and the construction of first-class specialties in traditional architectural culture heritage, and put forward the construction goal of "optimizing structure, strengthening connotation, deepening education reform and catalyzing achievements". On the basis of the existing disciplines of traditional architectural culture inheritance specialty, the overall design of cross-discipline with architecture, landscape architecture, civil engineering, agronomy, horticulture and other disciplines is further strengthened to promote the cross-fusion of traditional architectural culture inheritance disciplines with agriculture, science, engineering and other disciplines, and to take the initiative to serve the national strategy and to prosper the local culture and economy.

3.4.2. Building a three-dimensional curriculum teaching system

Firstly, combined with the general education of large-scale cultivation and the professional education during the period of selecting majors, the main ideological and political dimensions corresponding to the course clusters are appropriately imported to grasp the development of the worldview, outlook on life and values of the young students in this period, and to guide the students with the socialist core values.

Secondly, we take the core courses as the handles to build the "one-line" course group, develop the core courses of traditional architecture culture design, teaching innovation courses and traditional architecture characteristic courses according to the requirements of "core + innovation + characteristics", and drive the basic courses with the core courses, The core courses will lead the development of basic courses, elective courses and practical courses, and show the value of leadership.

Thirdly, the teaching system of the courses is linked by "two integration". By organizing students to participate in disciplinary competitions, the elements of course ideology and politics are integrated into the professional design. We will create a series of competitive design works that promote positive energy in society, and strive to cultivate students' sense of innovation, practical ability and teamwork spirit.

Fourthly, a "three-teaching" model has been adopted for the main body of teaching. Teachers of ideology and politics, taking into account the characteristics of their professions, carry out the "two lessons" of teaching, helping students to establish a correct outlook on the world, life and values, and guiding them to form good moral qualities through the "two lessons" of education.

3.4.3. Promote the reform and innovation of course practice teaching

Combined with the characteristics of the specialty and talent cultivation mode, and based on the integration of professional practice and course ideology and politics, we put forward the “four-round” practical training driving method, which includes professional ability training, understanding internship training, comprehensive research training and ability enhancement training. Professional ability training is combined with professional curriculum design to carry out project-based teaching, the entire teaching process from the first year to the third year, the main forms of sketching, color sketching, sketching practice and professional project practice. Skills training as the overall framework of the teaching system, including group learning level and individual learning level, the learning process advocates that students learn by doing, linking “learning” and “doing”, highlighting the innovation of skills training. The learning process advocates that students learn by doing, linking “learning” and “doing”, and emphasizes the innovative and practical nature of practical training.

The landscape design direction focuses on Chinese gardens, urban planning, landscape architectural design and industry codes. The results of the study tour are submitted in the form of reports or exhibitions. Ability enhancement training is a comprehensive application form to test students' professional knowledge and skills, and in most cases, the workflow is simulated according to the actual situation of enterprises, and practical training is carried out through job rotation.

Combined with the “joint class” to carry out practical teaching quality assessment, student-oriented, adhere to the construction of teachers and students, theory and practice, process and results of the combination of assessment and evaluation system, scientific evaluation of the learning effect of the students, the top internship stage of the work performance, business ability and professional quality as an important basis for practical teaching reform.

4. Conclusion

This study has obtained the following important findings by constructing the model of influencing factors on the quality of traditional architectural culture inheritance and innovative design talent cultivation and empirical analysis.

The recovery rate of the questionnaire survey reaches 93.2%, the sample has good representativeness, and the standard deviation of each test item is between 0.5953-0.6022, which indicates that the survey respondents have a high degree of consistency in their perception of the importance of each quality. The eigenvalues of the four main factors extracted by exploratory factor analysis were all greater than 1, and the variance explained rates were 29%, 11.25%, 9.64% and 6.29%, indicating that the constructed theoretical model has good explanatory validity.

The analysis of structural equation modeling reveals the mechanism of action between the influencing factors, and the direct influence coefficient of the student body on the management of colleges and universities is 0.2026, and the total effect on the social environment reaches 0.4029, reflecting the fundamental role of the student body in the process of talent cultivation. The influence coefficient of college management on the social environment is 0.3019, indicating that college management plays an important intermediary role in connecting internal and external environments. The direct influence coefficient of social environment on talent cultivation is 0.9454, which has the most significant effect among all influence paths, reflecting the decisive influence of external environment on the quality of talent cultivation.

Based on the results of the empirical research, we have constructed a disciplinary construction system with the goal of “optimizing structure, strengthening connotation, deepening education reform and catalyzing achievements”, and put forward a three-dimensional curriculum teaching system and a “four-round” practical training driving method, which provides a systematic solution for the cultivation of talents in traditional architectural culture inheritance and innovative design, and has important theoretical value and practical significance for the enhancement of the quality of talent cultivation.

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