

Research Article

Evaluation and Analysis of English Teaching Ability Based on Nonlinear Random Matrix Model

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With the sustained, rapid, and steady development of China's economy, the development of higher education is also faster and faster. With economic development and social progress, the demand for talents is also growing. Colleges and universities are the cradle of cultivating excellent talents and undertake the important task of cultivating reserve forces for the country. As an engineer of human soul, English teachers shoulder the responsibility of cultivating excellent talents and the hope of countless parents. For a long time, there have been many problems in the evaluation of College English teachers in China. For example, the assessment objective is too simple, only related to salary promotion and professional title evaluation. In terms of the content of evaluation, they often only pay attention to the quantity and level of scientific research results, ignoring the evaluation of potential, attitude, and other aspects, especially the social responsibility of teachers. Based on the theory of nonlinear random matrix and the theory of competence, this study establishes the quality evaluation model of university teachers in China by combining qualitative and quantitative methods. On this basis, it plays an important role in the selection, training, promotion, and further development of university teachers in China. First of all, according to a large number of domestic and foreign literature on competency, this study summarizes the competency theory and competency model. Using the hypothetical model, a questionnaire was designed and distributed to build a competency model of university teachers from four aspects: professional knowledge, related skills, work attitude, and personality motivation. Finally, the weight of each index in the model is calculated. This study not only constructs the competency evaluation model but also uses the principal component analysis method to calculate it in detail, which provides a good quantitative basis for the selection and performance evaluation of college teachers, so as to prevent the situation beyond its control. It paves an endless bright road for further stable and healthy development. Therefore, the overall research results of this study have greater practical application value and rich connotation.

1. Introduction

In recent years, with the rapid development of information technology and the acceleration of economic globalization, the society has higher and higher requirements for teachers' quality. In this context, teacher education reform has become a common feature of the world education and society, and teacher specialization has become an inevitable trend of teacher education development. Therefore, how to improve teachers' performance and cultivate excellent teachers' working ability has become an important issue for teachers' professional development.

The changes in the structure of teachers' reserve profession and the employment mechanism of schools have made it possible for teachers to flow. The opening of international teacher qualifications has attracted talents who have not received education and training to enter the teaching industry, making the teaching profession diverse and flexible. In June 1999, the third national education work conference and the decision of the CPC Central Committee and the State Council on deepening education reform and comprehensively promoting quality education proposed that "comprehensive and non-normal colleges and universities should be encouraged to participate in the training and

training of primary and secondary school teachers and explore the pilot establishment of normal colleges in qualified comprehensive colleges and universities.” Since then, there has been an open pattern in the teacher education and training system, and there has been a fair competition among all kinds of teacher education at all levels. In addition, all citizens can apply for teacher qualifications. As a result, the source of primary and secondary school teachers is no longer limited to normal college graduates. As an employer, in the face of a large number of candidates with teacher qualifications, how to effectively select excellent teachers and supplement the construction of the teaching team is a practical problem faced by every primary and secondary school principal and personnel supervisor.

Due to the demand of the public for high-quality educational resources, schools need high-quality teachers. With the development of economy, families account for an increasing proportion of their children’s intellectual investment. Many parents and students hope to enjoy high-quality educational resources and choose excellent schools to accept the guidance and learning of excellent teachers. For developing schools, especially private schools, having an excellent teaching staff is the fundamental guarantee to attract students, gain a foothold, develop, and expand. How to select excellent teachers and provide high-quality educational resources to the people is a problem that educational managers often think about and face.

The use of modern human resource management ideas, methods, and technologies provides a new way for school organization and management. In the first-class schools, teachers and students are the most important human resources. The expansion of school scale, the emergence of branches, and the flow of teacher resources have forced the transformation from traditional education management to modern human resource management.

Based on the above, the teacher competency model based on nonlinear random matrix can help us better describe the development process of high-level teachers. In the long run, this model can help educators establish a complete teaching model. It is of great practical significance to teachers, schools, and management organizations. For individual teachers, it can promote students to choose jobs, make their own career plans, promote their own sustainable development, career development, and promote their own development. In different types of schools and educational training units, it can be applied to the evaluation of teachers’ professional quality, post ability, performance management, etc. It can also be used as a reference for recruitment, salary design, promotion, salary increase, and dismissal and provide diagnosis, analysis, and guidance for the current situation of school teachers’ overall ability. As far as education administration and management are concerned, it can be used to evaluate teachers’ work needs, teachers’ work ability, teachers’ work advantages and aspects to be improved, teachers’ training plan formulation and training requirements prediction, teachers’ qualification determination, teachers’ qualification recognition, and future teachers’ training.

The innovation of this study is to study the theoretical model of nonlinear random matrix, including the limit

spectral distribution function. M-P theorem and single ring theorem are analyzed in detail, including the introduction and analysis of the current situation of teacher professionalization. It points out the urgent need for English teaching postcompetency model in today’s environment the advantages of this model and puts forward some understanding of post ability. According to the relevant theories of competency, a competency model of English teaching post is established by combining qualitative and quantitative methods. By analyzing the current situation and existing problems of human resource management in Colleges and universities in China, this study puts forward corresponding countermeasures and suggestions. Based on the hypothesis model and nonlinear random matrix theory, a competency model of English teaching post is established. Finally, the weight of each index in the model is calculated. This study not only has important theoretical and practical significance but also has important reference value for the professional development of English teachers.

2. Related Work

Competence in Latin means competent, which means appropriate. Song et al. believe that the word competence appeared in the management field in the 19th century, when the social division of labor was gradually refined after the European Industrial Revolution [1]. From then on, until the 1940s and 1950s, competency gradually attracted attention. Robert Wllite put forward the concept of competence. In the following decades, with the birth of the article “testing for competency rather than for intelligence” published by Professor Mecllland of Harvard University in 1973, the term “competency” received formal attention, and the research on competency began to formally enter the discussion stage. Hanada et al. believe that the origin of foreign research on teachers’ competence can be traced back to the 1960s. With the continuous development of educational psychology and the strong advocacy of the Federal Bureau of education deployment of the United States, there has been a change in the evaluation of college teachers from knowledge oriented to ability oriented [2]. Fang et al. believe that since the 1980s, the British government has vigorously promoted quality-based teacher assessment and set up a national education assessment center to conduct theoretical and practical research to improve the quality of education [3]. Jessie et al. believe that with the promotion of American and British education departments, the research on competency-oriented teacher competence has finally been recognized by scholars and teachers [4]. Liu and Lin defined competence as follows: knowledge, skills, abilities, traits, or motivation directly related to work performance or other important achievements in life, which is the decisive factor for individuals to take successful actions in work or situations [5]. Bae and Roh define it as follows: the potential characteristics of individuals that can lead to excellent performance at work, including motivation, characteristics, knowledge, skills, self-image, or social roles [6–8]. Makarov defines it as a potential and deep-seated personal feature that distinguishes the excellent from the mediocre in a job. The related competency

model construction is an important research and application achievement of human resource management theory in recent years [9–11].

This study holds that (1) the connotation of ability mainly includes external factors such as knowledge, skills, and social roles, as well as internal hidden factors such as motivation, attitude, and personality. (2) Ability is the starting point to measure whether a person has the ability to engage in a job. It is an individual characteristic that determines and distinguishes the advantages and disadvantages of future performance. (3) This indicator reflects the matching status of the employees with their required ability level and behavior performance. (4) Due to the increasingly dynamic cooperation among personnel, posts, and organizations, the ability of talents has a dynamic and sustainable development trend. The influence of competence on the company is mainly to establish a competency model. The competency model is a standardized written description and explanation, which requires high-performance work results in a specific position.

Tada et al. proposed an evaluation algorithm based on random matrix theory in the literature, which gives the evaluation algorithm in the case of large-scale systems [12]. Jurga and Morris conducted a large-scale system analysis under limited feedback [13]. Nowak and Tarnowski introduced a new method of array signal processing in the literature and robust estimation based on random matrix theory [14]. Gao et al. proposed a new central limit theorem based on random matrix theory for data with finite block length [15]. Nadimi et al. proposed a perception algorithm based on random matrix theory. This algorithm does not need to predict the statistical characteristics and noise variance of data noise but uses the limit distribution characteristics of random matrix eigenvalues for perception [16]. Ayumi proposed a competency estimation method suitable for limited data. This method realizes competency estimation based on random matrix theory and random sampling method [17].

Based on the nonlinear random matrix theory and the relevant theories of competence, this study makes an in-depth investigation from the following aspects: the important theorem of the nonlinear random matrix theory, the difference between competence and leadership, and the use of qualitative and quantitative methods to build a competency evaluation model for English teaching posts in China. Our method is different from the standard literature of stochastic nonlinear equations. With the help of scale transformation, we transform stochastic equations into stochastic nonlinear equations with low-order terms. Thus, based on the Strichartz estimation, we can apply the fixed point argument of the definite case to the latter equation. Our work improves the well-posed results of SNLS in the conservative case previously obtained by the direct method. Different from the latter, the global well posedness obtained by us is true for all nonlinear term indices in the interval, which is consistent with the determined case. And the weight of each index is determined. This has a great impact on selection, training, promotion and further development. It provides theoretical guidance and has great practical significance. It provides theoretical guidance and has great practical significance.

3. Methodology

3.1. Competency Evaluation Model of English Teaching Post. College English teachers are a special group in colleges and universities. Compared with other professional teachers, they have the characteristics of the longest teaching cycle, more class hours, and more classes. Due to the lack of a scientific measurement, the competency standard of College English teachers has left the impression that anyone can teach college English. At the same time, the recruitment and evaluation of College English teachers become a mere formality. This study intends to make an empirical analysis of the competence of College English teachers with the help of management research methods. A competency model of College English teachers is built to provide a basis for the selection, evaluation, and promotion of College English teachers.

Differences between competence and leadership are as follows: (1) competence is the starting point to measure whether a person is able to engage in a job. It is a personality that determines and distinguishes the advantages and disadvantages of future performance. (2) It has external factors such as knowledge, skills, and social roles, as well as internal factors such as motivation, attitude, and personality. (3) This indicator reflects the match between a person's required ability and behavior performance at work. (4) Due to the increasingly dynamic cooperation among personnel, posts, and organizations, the competency of talents has a dynamic and developing trend [17]. Leadership is a general term. In the process of leadership, leadership will automatically develop and serve its own leadership process. In a sense, leadership is a kind of resultant force, which is produced by the interaction between the attractiveness and influence of leaders and the choices and objections of the leaders. Leadership is formed in the process of leadership and serves the process of leadership. Competence is not only the process of leadership but also focuses on the level of leadership. Competence also includes execution and other aspects. The technical route for establishing common competency models is shown in Figure 1.

The competency questionnaire of this study consists of three parts: the first part is the basic information of the respondents, which is mainly used to count the professional titles of teachers and the grades of schools in various colleges and universities. The second part is a questionnaire about the quality of university teachers, which consists of 29 questions. It mainly investigates the university teachers' understanding and understanding and recognition of the established conceptual model of "competence." The third part is a test of the quality of university teachers, a total of 34 questions. The source of these questions is relatively simple, as long as the questions corresponding to the second part are replaced with other contents. Based on the established competency model, this section makes an empirical test on the competency status of the respondents. Figure 2 shows the composition and overall proportion of this study.

A total of 110 questionnaires and 103 receipts were sent out, and the effective response rates of 96 questionnaires were 93.6% and 87.2%, respectively. Professors, associate professors, and lecturers from four colleges were surveyed.

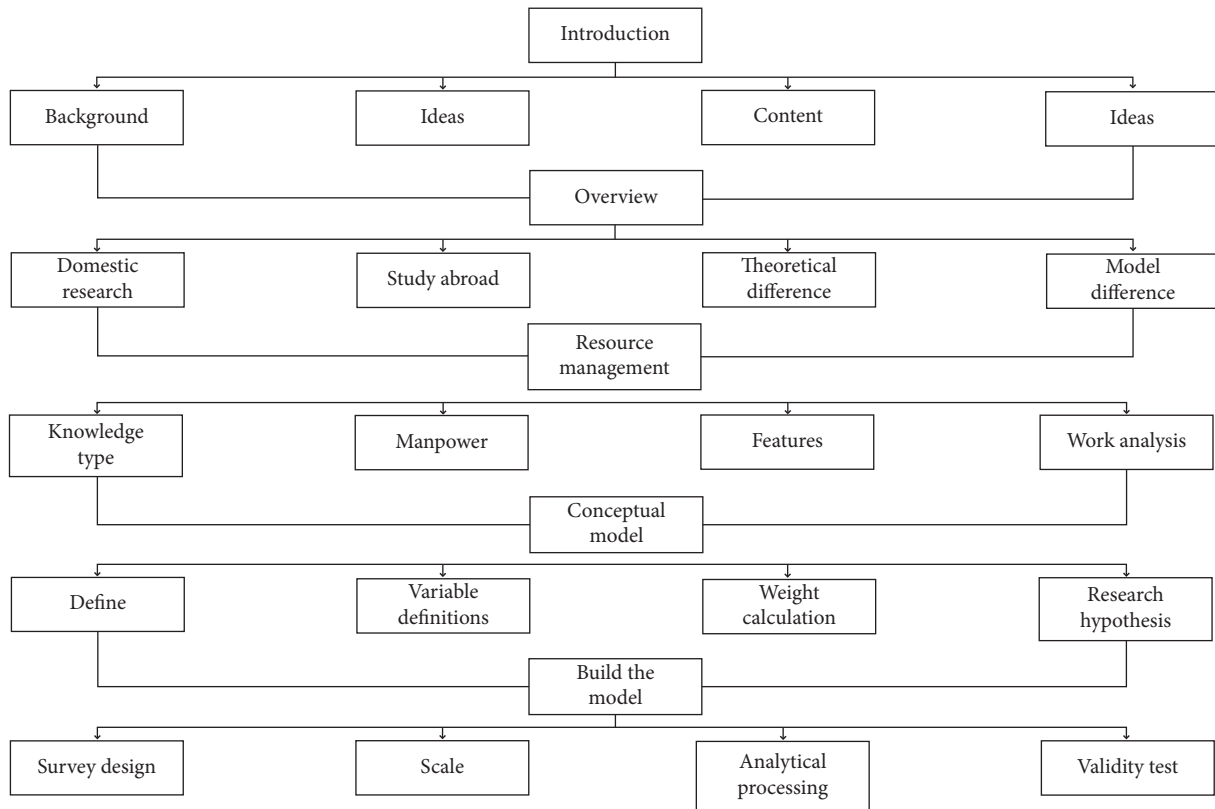


FIGURE 1: Common competency model establishment technical route.

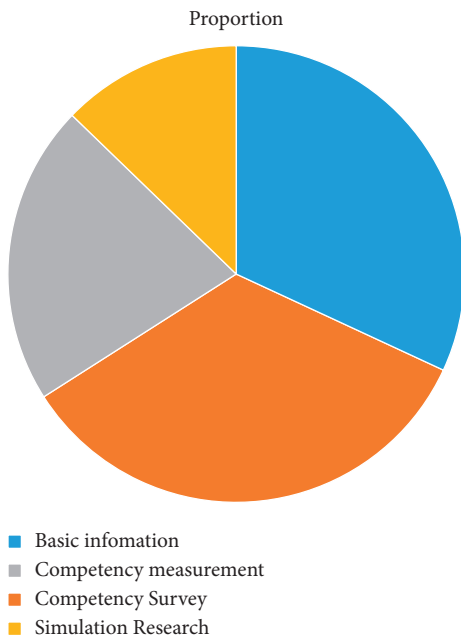


FIGURE 2: Composition and overall proportion of this study.

Their ages range from 30 to 50, and their positions range from lecturer to senior professor. The specific information of the respondents is listed in Table 1.

From the statistical analysis, it can be seen that as teachers participating in the questionnaire survey, they have a deeper understanding of the teaching and scientific

TABLE 1: Specific information of respondents.

College name	Number	Associate professor	High teaching age
A	60	38	45
B	9	7	7
C	11	9	11
D	16	8	10

research work of the university, and they have a clearer understanding of what kind of teachers the university needs in order to truly play the role and value of the university. This study takes some university teachers as the research object. The distribution of subjects is listed in Table 2, and the age distribution is shown in Figure 3.

This study divides the competency survey of university teachers into four categories: basic information, teacher competency survey, university teacher competency assessment, and university teacher work ability assessment. In the previous conceptual model of university teachers' ability, the university teachers' ability includes four primary indicators: professional knowledge, related skills, work attitude, and personal motivation. Professional skills are divided into four levels, namely, doctoral degree, major, existing research ability, and research results. The corresponding skill levels are five levels, which are language ability, communication ability, teaching ability, modern teaching equipment ability, and innovation ability. Work attitude is an important indicator, which includes four main indicators: work responsibility, organizational participation, organizational commitment, and organizational performance. The first

TABLE 2: Distribution of research objects.

	Options	Number	%
Gender	Man	57	57
	Woman	43	43
Identity	Teacher	103	100
Age	> 45	35	33.9
	40–45	25	24.2
	35–40	29	28.1
	30–35	14	13.5

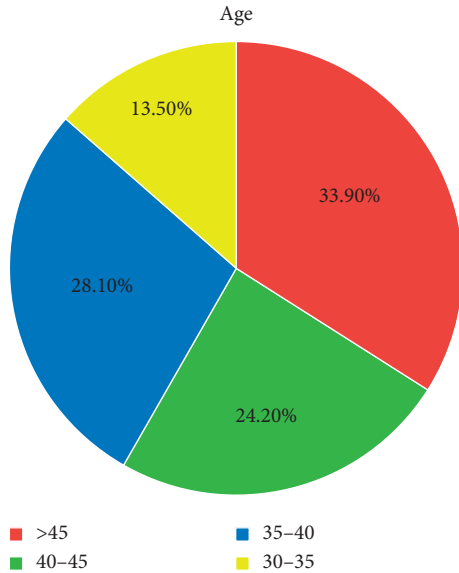


FIGURE 3: The age distribution of the interviewees.

indicator is personality motivation, and the second indicator is self-confidence, social responsibility, motivation, and dedication. The competency indicator system is shown in Figure 4.

The data were analyzed and processed by principal component analysis. The current problem is that the amount of questionnaires is not high, which needs further in-depth research and analysis. When selecting statistical data, there are usually the following provisions: (1) the ratio of sampling capacity to variables should be greater than 5: 1. (2) The sampling capacity is 100. The relevant results show that the proportion of the research model is appropriate. The accuracy of parameter estimation is high and the statistical distribution is appropriate [18]. If the result of the observation item except its object is 3 or 4, the number of samples is 100. If the ratio is greater than or equal to 6, even 50 samples are the same. The principle of “more is better” is verified through experiments. The number of n (samples) is the best, and the number of questions of each factor is the largest. A summary of the above survey is listed in Table 3.

3.2. English Teaching Post Competency Model Based on Nonlinear Random Matrix.

The randomness matrix theory comes from nuclear physics. Through the study of quantum systems, Wigner came to the conclusion that in a complex quantum mechanical system, the prediction of the random matrix theory is an average of all possible interactions [19]. This kind of attribute independent of prediction can reflect the special nonrandomness of the system, which provides theoretical support for understanding and studying these potential interactions and connections. In recent years, a large number of random matrix theories have been used in the evaluation system. There are many theories about random matrix, including single ring theorem, M-P theorem, and so on. In the actual evaluation system, due to the influence of the external environment, the calculation results of each index have a certain randomness. By sorting the variable data in the real system according to certain rules, we can get a matrix with certain randomness. Two basic concepts of random matrix are empirical spectrum distribution function and limit spectrum distribution (LSD). When the eigenvalue of an arbitrary matrix is a real number, the empirical spectrum distribution function is as follows:

$$F^A(x) = \frac{1}{N} \sum_{i=1}^N I(\lambda_i^A \leq x). \quad (1)$$

The limit spectrum distribution function is the limit of empirical spectrum distribution. The distribution of empirical spectrum has strong randomness, but it is generally not random. Under the condition that the row column ratio of any matrix is constant and the number of columns and rows tends to be infinite, its limit spectrum distribution function shows the M-P theorem (Marchenko–Pastur law), single ring theorem, etc.

Single Ring Theorem. Suppose X is a nonHermitian nonlinear random matrix, each element of which is an independent identically distributed random variable, and the expectation and variance meet the conditions. For L nonlinear random matrices, the product formula is as follows:

$$Z = \prod_{i=1}^L X_{M,i}. \quad (2)$$

The singular value equivalent matrix of X can be obtained by using the following formula:

$$X_M = \sqrt{XX^H U}. \quad (3)$$

The standard matrix product satisfying all conditions is obtained by uniting the matrix. When the row and column are approximately infinite and the ratio of row to column is constant, the probability density function of the empirical spectrum distribution of the matrix in the single ring theorem is as follows:

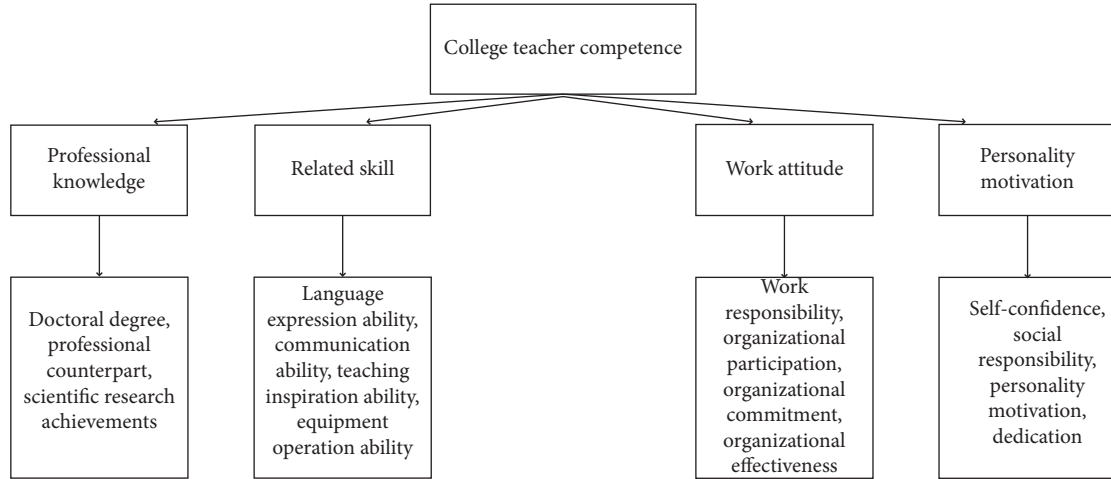


FIGURE 4: Competency index system.

TABLE 3: Evaluation criteria.

No	Evaluation standard	Research result
1	Number of samples ≥ 100	Satisfy
2	Number of samples ≥ 10	Barely fit
3	Number of sample 100–150	Satisfy

$$f(\lambda) = \begin{cases} \frac{1}{\pi c L} |\lambda|^{(2/L)-2}, & (1-c)^{(L/2)} \leq |\lambda| \leq 1, \\ 0, & \text{Others.} \end{cases} \quad (4)$$

Of which

$$c = \left(\frac{N}{T}\right) \in (0, 1]. \quad (5)$$

Marchenko–Pastur theorem is a random matrix theory, which has been proved by Marchenko and Pastur. It can be used to describe the eigenvalues of large-dimensional covariance matrix and has good application value. Suppose a random matrix whose elements are independent and identically distributed and meet the expected value and variance value, the sample covariance matrix formula of the matrix is as follows:

$$S = \frac{XX^H}{T}. \quad (6)$$

At this time, the empirical spectral distribution of the sample covariance matrix converges to the density function nonrandomly:

$$f(\lambda_{S_N}) = \begin{cases} \frac{1}{2\pi c \lambda_{S_N} \sigma^2} \sqrt{(b - \lambda_{S_N})(\lambda_{S_N} - a)}, & a \leq \lambda_{S_N} \leq b, \\ 0, & \text{Others,} \end{cases} \quad (7)$$

where

$$\begin{aligned} a &= \sigma^2 (1 - \sqrt{c})^2, \\ b &= \sigma^2 (1 + \sqrt{c})^2. \end{aligned} \quad (8)$$

For any matrix X , its eigenvalues can reflect the statistical properties of the matrix, but the eigenvalues of a single matrix are often irregular. Therefore, this study proposes a method based on linear eigenvalue statistics (LES) and makes a quantitative analysis. For random matrix X , its linear eigenvalue statistics is defined as follows:

$$N_n(\phi) = \sum_{i=1}^n \phi(\lambda_i). \quad (9)$$

Various forms of linear eigenvalue statistics can be obtained by selecting different test functions. Mean spectral radius (MSR) is a commonly used Les structure, which is usually used to reflect the statistical properties of random matrices. In the single ring theorem, the average spectral radius is usually used, and its expression is as follows:

$$r_{MSR} = \frac{1}{N} \sum_{i=1}^N |\lambda_i|. \quad (10)$$

When constructing the conceptual model of university teachers' competence, we must clarify the relevant indicators of the conceptual model, which is the focus and difficulty of this study. On this basis, this study proposes a new theoretical framework, as shown in Figure 5.

According to the purpose and principle of model construction, following the idea of model construction, combined with the needs of empirical analysis, considering the relationship between independent variables, intermediate variables, control variables, and dependent variables, this study constructs a conceptual model of influencing factors of university teachers' competence and strives to include the factors affecting university teachers' competence as comprehensively as possible. From the perspective of the overall framework of the model, the factors affecting the competence of university teachers on the left are as follows: professional knowledge (with a doctor's degree, professional

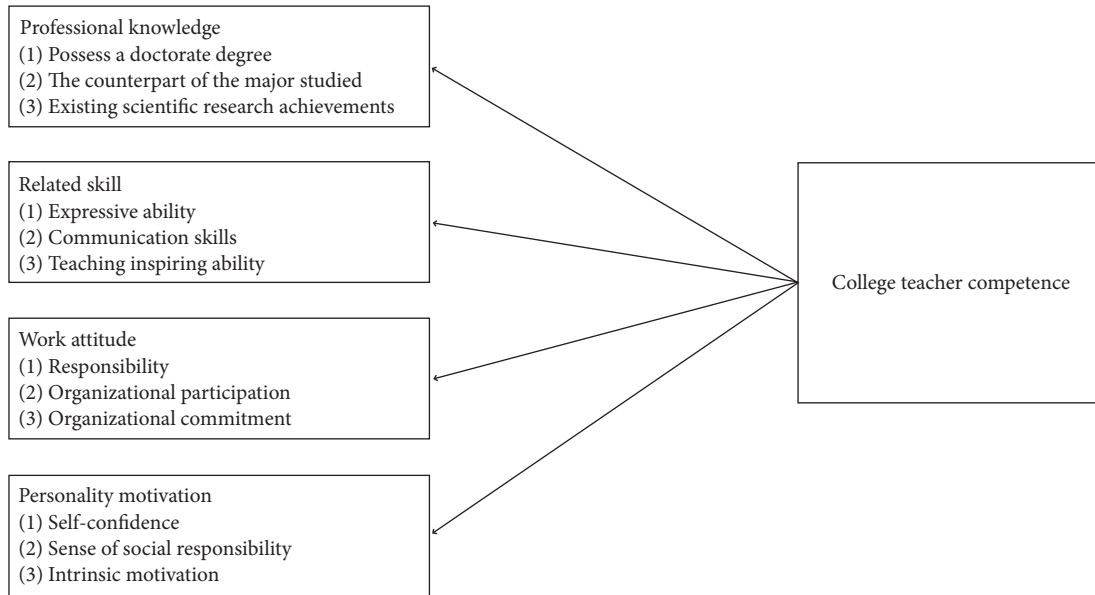


FIGURE 5: Theoretical framework.

counterparts, existing scientific research ability, and achievements), relevant skills (language expression ability, ability to operate modern teaching equipment, teaching inspiration ability, ability to communicate with others, and scientific research innovation ability), personality motivation (self-confidence, achievement motivation, sense of social responsibility, dedication), and the intermediate variables are work attitude (work responsibility, organizational participation, organizational commitment, and organizational effectiveness). The three factors on the left, as independent variables, affect the competence of college teachers. The right box is the competency of university teachers, which is the dependent variable of this study. The working attitude of college teachers above is the intermediate variable of this study.

On this basis, from the perspective of theory and practice, this study establishes a conceptual model that affects the competence of university teachers and puts forward a new evaluation method on this basis. From the perspective of the overall structure, the left side is the main factor that affects the ability of university teachers: professional knowledge (with doctoral degree, major, existing scientific research ability, and achievements), relevant skills (language expression ability, ability to operate modern teaching equipment, teaching inspiration ability, ability to communicate with others, and scientific research innovation ability), and personality motivation (self-confidence, achievement motivation, sense of social responsibility, and dedication), The intermediate variables are work attitude (work responsibility, organizational participation, organizational commitment, and organizational effectiveness). The three factors on the left have a certain impact on the ability of university teachers. On the right is the ability of university teachers, which is the influencing factor of this study. The top-level

university teachers' work attitude is the intermediate variable of this study.

4. Result Analysis and Discussion

Teachers should have noble ideology and morality and love education. Teachers are responsible for teaching and educating people. While spreading cultural and scientific knowledge to students, teachers teach students how to be a person and be an ideal person. To have profound cultural and scientific knowledge, teachers are the disseminators of cultural and scientific knowledge. Therefore, teachers must have profound scientific knowledge and gradually reach a higher level in cultural cultivation. In terms of the reliability of the survey, generally, trust analysis is conducted for questions or questions about attitude, personality, interest, etc. This type of questionnaire is usually conducted in a quantitative manner. The purpose of this study is to explore the connotation of the quality model of university teachers. It is a questionnaire survey on the types of students' work attitudes and analyzes its credibility. Reliability can be roughly divided into four categories: retest method, duplicate correlation method, half method, and Cronbach factor method, and Cronbach factor method is the most common [20]. In the reliability evaluation, the reliability of the questionnaire is closely related to the value of the factor. Table 4 is the reliability reference table.

In the simulation experiment of competency model, when the reliability of two samples increases, the generalization coefficient and accuracy index will increase. Figure 6 shows the trend of evaluation accuracy and sample reliability.

In order to test the accuracy of English teaching post-competency evaluation and the processing effect of relevant data, this study uses the simulation method to study the

TABLE 4: Credibility reference table.

Reliability	Cronbach α coefficient
Untrusted	Cronbach α coefficient < 0.3
Barely credible	$0.3 \leq$ Cronbach α coefficient < 0.4
Credible	$0.4 \leq$ Cronbach α coefficient < 0.5
Very believable	$0.5 \leq$ Cronbach α coefficient < 0.7
Very credible (less common)	$0.7 \leq$ Cronbach α coefficient < 0.9
Very credible	$0.9 \leq$ Cronbach α coefficient

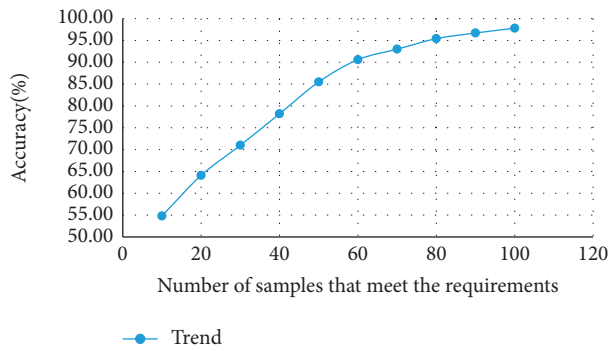


FIGURE 6: Trends in evaluation accuracy and sample reliability.

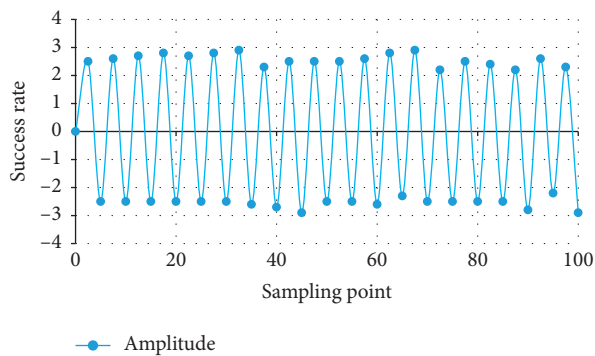


FIGURE 7: Simulation data distribution waveform.

TABLE 5: Comparison data of utilization test results.

Evaluation cycle	Random matrix (%)	Experience assessment (%)	Questionnaire evaluation (%)
1	95.00	89.30	87.40
2	93.30	86.00	87.30
3	92.80	84.80	80.40
4	91.20	83.50	84.80
5	91.00	84.00	86.10
6	90.60	85.50	87.90
7	94.10	81.00	81.80
8	92.70	80.40	82.80
9	90.60	85.70	88.90

evaluation of English teachers' work ability, sets the judgment threshold of evaluation, sets the relationship between educational resources and skill allocation, sets the sampling frequency of 500 Hz, the adaptive starting step of 0.96, and the characteristic allocation relationship of 1.15, The

TABLE 6: Accuracy test results comparison data.

Evaluation cycle	Random matrix (%)	Experience assessment (%)	Questionnaire evaluation (%)
1	95.00	89.30	87.40
2	93.30	80.40	89.30
3	92.80	87.90	81.00
4	91.20	81.80	84.80
5	91.00	88.90	80.40
6	93.60	89.30	88.90
7	94.10	81.00	87.90
8	92.70	80.40	81.80
9	90.60	88.90	87.90

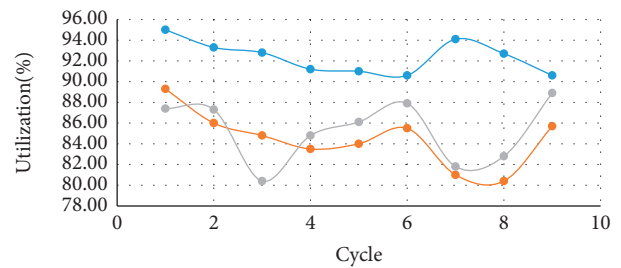


FIGURE 8: Utilization comparison.

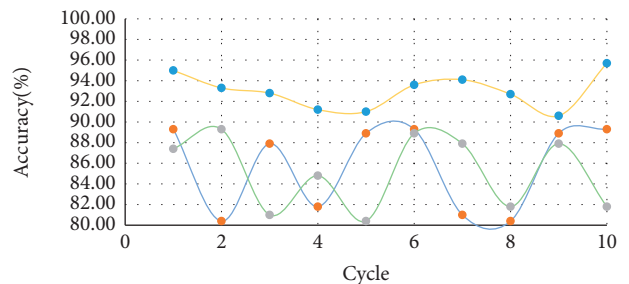


FIGURE 9: Comparison of accuracy test results.

evaluation index of English teachers' working ability is reconstructed, and the time domain waveform is obtained, as shown in Figure 7.

The research object selects the big data statistical results of the above indicators and parameters and carries out data clustering and information fusion processing on them, so as to realize the evaluation of teaching postcompetency. The test utilization results compared with the traditional experience evaluation method and the traditional questionnaire evaluation are listed in Table 5, and the accuracy results are listed in Table 6. The test results show that when evaluating the competency of teaching posts, the accuracy obtained by this method is relatively high, and the utilization of teaching resources is improved.

Figure 8 shows the comparison of utilization results. The sample data of the above indicators are used for data aggregation and information integration to complete the assessment of teaching postcompetency. The experimental results show that the accuracy of this method is relatively high, which can effectively promote teachers' teaching work. Figure 9 shows the comparison of accuracy test results.

5. Conclusions

Based on the nonlinear random matrix, this study establishes the competency model of English teaching post by using the methods of qualitative and quantitative analysis. The principal component analysis method is used to calculate it in detail, which provides a good quantitative basis for the selection and performance evaluation of university teachers. The competency evaluation model is built to prevent situations beyond its control. It paves an endless bright road for further stable and healthy development. The design and research of this study have indeed achieved some results. The competency evaluation model based on nonlinear random matrix theory has incomparable advantages over other models. Therefore, the overall research results of this study have greater practical application value and rich connotation. However, the research still has some limitations. This study lacks practical evaluation and analysis of some foreign language research materials. There may still be some deviations in the translation and understanding of literature research. This leads to the accuracy deviation of the research results.

Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Acknowledgments

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