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A Study on the Specialization Setting of Higher Vocational Colleges and Universities in the Context of Slow Employment of Youths in the Perspective of Employment Prospects

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Abstract

In order to provide more accurate guidance on major selection to students in higher vocational institutions, professional courses in higher vocational institutions are first classified according to the depth and chronological order of the courses, and the index transformation is carried out on the index data of the classified professional courses. Solve the eigenvalues and eigenvectors of the relevant indexes, and select the principal components to determine the weights, use factor analysis to explain the problem of professional courses in institutions affecting the slow employment of young people, and put forward suggestions for optimization of professional settings in combination with the analysis results. The results show that the method of this paper is important for improving the employment competitiveness of students as well as meeting the demand of the employment market by completing the employment problem of fresh graduates in the shortest time from 31 days to 45 days.

Keywords: *indicator transformations, higher education majors, indicator transformations, factor analysis, indicator data, major programs*

Introduction

In the continuous development of higher education today, the professional setting of higher vocational colleges and universities has become a topic of great concern (L. Zhang & Guan, 2021). With the change of social demand for talents and the adjustment of economic structure, it is more and more important that higher vocational colleges and universities should pay more and more attention to the employment prospect in the continuous development of higher education today (Precup et al., 2020). In contrast, the problem of slow employment of youth has gradually come to the fore (Halper, Craft, & Shi, 2020; Kenny et al., 2021; Palmer et al., 2019). Youth slow employment not only causes economic pressure and psychological burden on individuals, but also brings certain challenges to social stability and development (Consiglio et al., 2021). In order to better understand the phenomenon of youth slow employment, in-depth study of the professional setting of higher vocational colleges and universities, which is one of the core contents of higher vocational colleges and universities, is directly related to the employment prospects of students and future career development (Consiglio et al., 2021; Lytinen, 2020). Therefore, this study aims to conduct an in-depth discussion on the professional setting of higher vocational colleges and universities in the context of youth slow employment (Agyingi, Wiandt, & Ngwa, 2017). Understanding and studying the factors of specialty setting in higher vocational colleges and universities is of great significance for the higher vocational education system to better adapt to the social demand and improve the quality of talent cultivation (Wu & Anderson, 2021).

Tang, D et al. (Tang, Yang, & Kang, 2023) In order to adapt to the development of the society and cultivate the suitable talents, they put forward a quadratic specialty connotation construction mode with curriculum construction as the core, school-enterprise cooperation as the platform, theme activities as the carrier, and team building as the guarantee (Wu & Anderson, 2021). Livezey, M (Livezey, 2021) proposed diversity

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analysis methods to optimize the professional setting of higher vocational colleges and universities, retaining the discussion of all the students in STEM, and evaluating the results related to a specific course in conjunction with DEI-inspired instructional techniques, which significantly improve the performance of majors and non-majors, thus adjusting and optimizing the professional setting for students' employment performance. Zang, X introduced the mobile search algorithm into the employment accessibility test, obtained the characteristics and formation mechanism of college students' employment accessibility in the study case, and proposed the corresponding control strategies (Zang, 2022).

Zhang, Gong et al. proposed that the cross integration of majors is the new trend of the current high-level employment talent cultivation, established the similarity analysis method of learning interest between majors, classified the readers into majors according to the similarity between students, and constructed a complex network of similar learning interest between majors using group behavior data (Zang, 2022; Q. Zhang et al., 2020). Through the network topology analysis, the importance of network nodes and Louvain's algorithm to calculate the similarity between different majors, it reveals the characteristics of learning interests between different majors and helps higher vocational colleges and universities to make decisions on major settings for effective employment (Pu, Yan, & Zhang, 2021).

Lyu, Y et al. conducted a comprehensive evaluation of teaching and research performance of art majors in higher vocational colleges to optimize resource allocation and improve teaching quality (Lyu, Yang, & Yao, 2020). Based on the performance evaluation theory and input-output theory, the comprehensive index system of professional science and technology performance evaluation was designed from the two dimensions of teaching and research (Dorfman et al., 2021), based on which the performance evaluation model of art majors was constructed by using principal component analysis (Sun, Park, & Barrera, 2017). Finally, the model was used to carry out single-factor evaluation and comprehensive evaluation of the R&D performance of higher vocational colleges and universities, and the evaluation results were utilized to provide specific data for these decision-making departments, which in turn provided professional settings that matched the demand of the employment market (Bosselman, 2021; Tang et al., 2023).

In summary, some scholars have made some progress in the study of slow employment in higher vocational colleges and universities, but there are still some problems and urgent challenges to be solved. This study will reveal the correlations and differences between different majors through factor analysis of the major settings in higher vocational colleges. Firstly, the professional courses in higher vocational colleges are classified according to the depth and chronological order of the courses, which are literacy courses, public basics, professional basics, professional courses and extension courses, practical courses, practice courses, and graduation design. The mean and standard deviation of the classified professional course index data are calculated, and the relevant index eigenvalues and eigenvectors are used to determine the value of the principal component weights, and through in-depth analysis of the factors contained in different professions, the professional course problems of institutions that affect the slow employment of young people are explained, and the combination of the problems is used to provide reference and guidance for the higher vocational colleges and universities and to rationally adjust the professional settings. Thus, it promotes the improvement of the employment competitiveness of higher vocational graduates and reduces the occurrence of slow employment phenomenon.

Classification system of specialized courses in higher vocational colleges and universities

Professional course classification system based on employment background refers to a way of scientific classification and arrangement of professional courses according to the employment demand of different industries and fields. In the professional setting of higher vocational colleges and universities, a scientific and reasonable professional course classification system can realize the optimal allocation of educational resources (Lamb, 2019). Through the scientific classification of the curriculum design, matching the professional courses with the employment needs of different industries can provide students with more targeted training and education. In this way, during the learning process, students can be more clear about their career development direction, develop relevant practical skills and professional knowledge, and improve their competitiveness in the job market (Wang et al., 2022).

According to the information background of the curriculum classification of higher vocational colleges and universities, following the principle of gradual progressivity and the theoretical principle of Vygotsky's

nearest development zone, the professional courses of higher vocational colleges and universities are classified according to the depth and chronological order of the courses, which are the literacy courses, the public basics, the professional basics, the professional education courses and the extension courses, the hands-on courses, the practical courses, and the graduation design (Livezey, 2021).

The specifics of the classification of professional courses in higher education institutions are shown in Table 1. It can be seen that the classification of courses of study is in line with Vygotsky's theory of the zone of recent development, the level of development of students includes the existing level of development and the level of potential development, then the level of potential development can be resolved on the basis of the existing level of development through certain efforts. This is an important basis for measuring whether the study of various theories and various technologies in school meets the graduation criteria and is a test of the degree of knowledge mastery of students' specialties (Korznikova, Korneva, & Korznikova, 2020).

Table 1 Classification System of Professional Courses in Vocational Colleges

Course classification	Course Name
Literacy courses	Basic general courses such as college English, college physical
Public Basic Courses	Generally including moral cultivation, Marxist philosophy, etc
Professional Basic Courses	Basic professional courses required for learning advanced knowledge in this field
Professional courses	Courses usually offered in sophomores and juniors, the core courses of the major
Extended courses	Generally, it is a variety of elective courses aimed at enriching personal life or improving one's own abilities
Practical courses	Courses with general operational nature, such as experiments, practical training, etc
Social Practice	Courses that generally have the nature of validating theories, such as educational internships and social practices.
Graduation Design Thesis	The graduation design stage of the final undergraduate course

Factor analysis of specialized curriculum setting

Factor analysis, as a multivariate statistical analysis of educational information, groups several variables that are related and relatively close together in the same category, and each category of variables becomes a factor, reflecting most of the information of the original sample with a fewer number of factors, so as to achieve the purpose of dimensionality reduction.

Studying the problem of slow employment of students in higher vocational colleges and universities can help us gain a deeper understanding of the reasons and influencing factors behind the phenomenon of slow employment. Through the factor analysis of the professional curriculum, the influence of each professional course on slow employment can be revealed, so as to have a grasp of the curriculum of Educational Technology in general, and to optimize the teaching content in a targeted way to make adjustments to the professional curriculum of higher vocational colleges and universities proposed. This helps to improve the employment competitiveness of higher vocational graduates and reduce the occurrence of the phenomenon of slow employment.

Standardization of raw data

Because the data processed is the overall data of professional courses in higher vocational colleges and universities, it is necessary to standardize the data of the selected indicators, so that the mean value of each indicator after transformation is zero, and the variance is 1. Assuming that there are m and $R_1, R_2, \ldots, R_m$ indicator variables for principal component analysis, and there are a total of n evaluation objects, r_{ij} represents the value of the j th indicator in the i th formula that is not standardized, and the formula for the calculation of the mean and the standard deviation is as follows The formula for calculating the mean and standard deviation is as follows:

$$\overline{r}_j = \frac{1}{n}\sum_{i=1}^{n} r_{ij} \quad (1)$$

$$s_j = \sqrt{\frac{1}{n-1}\sum_{i=1}^{n}(r_{ij} - \overline{r}_j)^2}\,(j+1,2...m) \quad (2)$$

The formula for dimensionless normalization of variables is:

$$x_{ij} = \frac{r_{ij} - \overline{r}}{s_j}(i+1,2...n,\ j=1,2...m) \quad (3)$$

Where $\bar{r}_j$ is the mean of the jnd indicator, s_j is the standard deviation, x_{ij} is the value of the jth indicator after standardization to remove the i th classmate of the scale, and the standardized indicator vector calculation formula:

$$X_i = (x_{1j}, x_{2j}, ..., x_{nj})', (j=1,2...m) \quad (4)$$

Pre-processing of specialized data for courses in higher education institutions

Calculate the correlation coefficient matrix, which is as follows:

$$P = (p_{ij})_{m\times n} \quad (5)$$

$$p_{ij} = \frac{\sum_{k=1}^{n} x_{ki}x_{ki}}{n-1}, (i,\ j=1,2...m) \quad (6)$$

where $p_{ij} = 1, p_{ij} = p_{ji}$ is the correlation coefficient between indicator i and indicator j. After obtaining the correlation coefficients of the indicators it is necessary to calculate the eigenvalues and eigenvectors to calculate the eigenvalues of the correlation coefficient matrix P :

$$\lambda_1 \geq \lambda_2 \geq ... \geq \lambda_m \geq 0 \quad (7)$$

The eigenvector $C_1, C_2, \ldots, C_m$ corresponding to the eigenvalue is expressed as follows:

$$C_j = (c_{1j}, c_{2j}, ..., c_{nj}) \quad (8)$$

C_j New composite indicator variable composed of eigenvectors:

$$F_1 = c_{11}X_1 + c_{21}X_2 + ...c_{m1}X_m \quad (9)$$

$$F_2 = c_{11}X_1 + c_{21}X_2 + ...c_{m1}X_m \quad (10)$$

$$F_m = c_{1m}X_1 + c_{2m}X_2 + ...c_{mm}X_m \quad (11)$$

where F_1 represents the first principal component, F_2 represents the second principal component, and F_m represents the mth principal component.

Calculation of weights

In the calculation process, the information contribution of principal component F_j after linear transformation is generally explained by the variance contribution a_j, a_h is the cumulative contribution, and a_j and a_h are calculated as follows:

$$a_j = \frac{\lambda_i}{\sum_{k=1}^{n} \lambda_k}, (j = 1, 2...m) \quad (12)$$

$$a_k = \frac{\sum_{k=1}^{h} \lambda_k}{\sum_{k=1}^{m} \lambda_k}, (h = 1, 2...m) \quad (13)$$

The basis for selecting the number of principal components after calculation depends on the cumulative contribution a_h and is generally selected $a_h > 85\%$. The first $h, (h < m)$ principal components are selected, $F_1, F_2, \ldots, F_h$ replacing the original m variables. To further analyze the data, this time the first h principal components $F_1, F_2, \ldots, F_h$ are composite variables maintaining 85% of the information in the original variables, and the weight vector ϖ expression:

$$\varpi = (a_1, a_1, ..., a_h) \quad (14)$$

The new matrix of data indicators for professional programs in higher education institutions is:

$$F = (F_1, F_2, ..., F_h)' = \begin{bmatrix} f_{11,} f_{12,}..., f_{1h} \\ f_{21,} f_{22,}..., f_{2h} \\ ..., ..., \ddots, ... \\ f_{n1,} f_{n2,}..., f_{nh} \end{bmatrix} \quad (15)$$

Course Factor Analysis

Factor analysis is a data simplification technique, which can effectively reduce the number of variable dimensions and simplify the structure by studying the internal dependency relationship between many variables, exploring the basic structure in the observed data, and using a few hypothetical variables to represent its basic data structure. The core is to use fewer independent factors to reflect most of the information of the original variables, and at the same time to derive the weights reflecting the amount of information contained in the factors and indicators, in order to calculate the comprehensive evaluation value. Thus, the selection of indicator weights overcomes the influence of subjective factors and helps to objectively reflect the reality of the relationship between the samples.

Factor analysis describes the interrelated variables of the matrix of professional program data indicators for higher education institutions using a linear combination of a minimum number of unobservable, uncorrelated common factors. Its purpose is to explain the existence of correlations between stem original variables as rationally as possible. The purpose of this analysis is to validate the specialized courses that affect the slow employment of youth through factor analysis.

The results of the output data by SPSS factor analysis are shown in Table 2. Kaiser pointed out that the judgment criteria of KMO statistic for performing factor analysis are above 0.9 is very suitable, 0.8 is suitable, 0.7 is average, 0.6 is not very suitable, and 0.5 or less is not suitable. The KMO value=0.925 means that the stronger the correlation between the variables, the more the original variables are very suitable for the factor analysis. Bartlett's test of sphericity is obtained from the determinant of the correlation coefficient matrix.

If the value is large and its corresponding probability of concomitance value is less than the level of significance in the mind of the user then the null hypothesis should be rejected and it is considered that the correlation coefficients are not likely to be a unit array i.e., there is a correlation between the original variables and they are suitable for factor analysis.

Table 2 KMO and Bartlett's test

Test	Numerical value
Kaiser Meyer Olkin measure of sampling adequacy.	0.925
Bartlett's sphericity test approximate chi square	3833.058
Df	595
Sig	0.000

Bartlett's test of sphericity approximate chi-square = 3833.058, a large value, Sig = 0, suitable for factor analysis Secondly, the variance promax was finally analyzed using a variance approximation of the maximum variance skewed spin (Mann, 2021; Mölk, Auer, & Peters, 2022). Explain the issue of institutional specialized curriculum that affects the slow employment of youth (Ruppenthal, Fernandes, Santos, Roehe, & Damin, 2021). The overall flow chart of the factor analysis of the professional curriculum of higher vocational institutions is shown in Figure 1. First of all, the data of professional courses in higher vocational colleges and universities are collected, the professional courses are classified according to the depth and chronological order of the courses, and the classified indicator data are calculated based on the indicator transformation (Kozono, Tashiro, Kanemiyo, & Nakabayashi, 2020). After obtaining the correlation coefficients of the indicators, it is necessary to calculate the eigenvalues and eigenvectors, and select the principal components to determine the weights to reveal the correlation and differences between different majors (Jaeger, 2020). By deeply analyzing the factors included in different specialties, it can provide reference and guidance for higher vocational colleges and universities to rationally adjust the specialty settings.

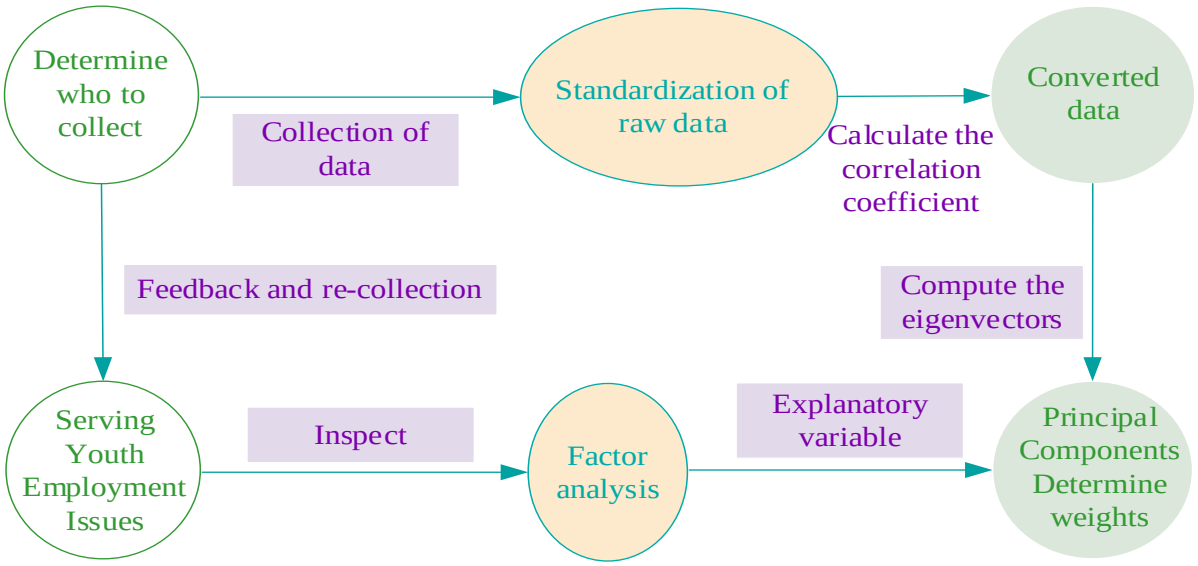

Figure 1: Factor Analysis of Professional Curriculum Offerings in Vocational Colleges

Specialization of higher vocational colleges and universities

Professional management of courses in higher education institutions

Explaining the issue of institutional specialization programs affecting the slow employment of young people based on the factors included in different specializations, which focus on the development of different competencies and skills that are in different demand in the current job market. They are provided with more accurate guidance on major selection (Maxham & Miller, 2020), which enhances employment success and satisfaction. The management of course specialization in higher education institutions is divided into four sections, namely, new course category, course category list, new course information, and course information list.

Figure 2 shows the professional management board of courses in higher education institutions, and the addition of course categories indicates that in addition to this paper, courses are divided into eight categories. Users can also add categories according to the requirements of the analysis, such as adding extended course categories. Course category list indicates that not only can you browse and query the list of existing course

category information (Marinello, Leider, Pugach, & Powell, 2021). You can also edit the existing list of categories, such as the course has been divided into categories for deletion, modification and other operations. New course information means that you can add course information and assign a category to the added course, such as College English belongs to the information literacy category. The course information list indicates that you can browse and query the categorized course information, modify the name of the course, delete the course, and so on.

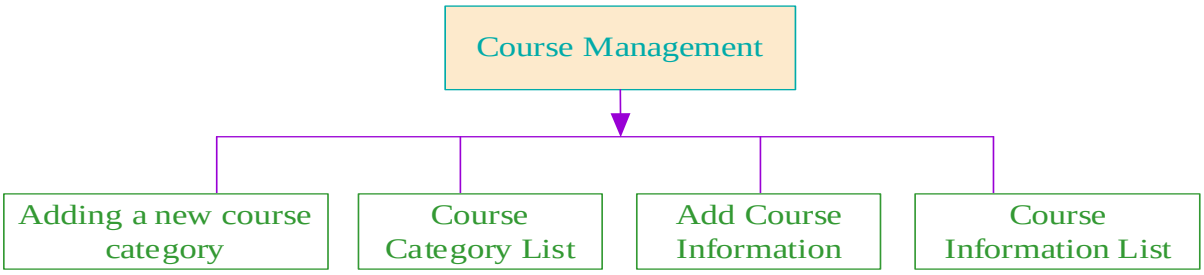

Figure 2: Professional Management of Curriculum in Vocational Colleges

Specialization of higher vocational colleges and universities in the context of slow employment of young people

The above factor analysis is utilized to explain the correlation of slow employment problems in the professional setting of higher vocational colleges, and on the basis of optimizing the professional management of higher vocational colleges and universities' courses, four professional setting strategies are proposed, which are constructed on the basis of integrating theory into practice, strengthening the recommendations of market research and analysis, analyzing supply and demand in response to demand, and establishing job clusters to set up professions. As follows:

(1) Only by combining the needs of the construction of professional settings in higher vocational colleges and universities, the theory and the actual integration of science. Firstly, analyze the construction of vocational standards in its entire professional setting, take the cultivation of students' employment ability as the basis, explore the construction of vocational standards in social development, and make clear the demand for the construction of vocational standards in social development. Secondly, in the learning process of vocational standards, higher vocational colleges and universities should establish a perfect student learning management system to ensure that the construction and guidance process of the student management system can provide help for the curriculum and professional settings of higher vocational colleges and universities.

(2) The market is a construction work that should be focused on perfecting the professional curriculum of higher vocational colleges and universities, and in the premise of high employment of young people, it is necessary to cater to the needs of higher vocational colleges and universities for their own talent cultivation and construction, and to implement the research system of students' educational work. Combined with the market-oriented research and development needs, make scientific improvements to the professional settings. In higher vocational colleges and universities before the professional setting, the organization of the relevant departments to carry out scientific market research, so as to ensure that in the disposal and optimization process of market research work, you can understand the social development of talent construction needs, so as to more effectively carry out the construction of student curriculum professional system, in order to meet the needs of higher vocational colleges and universities in the development of the education industry.

(3) Supply and demand should be an important indicator of economic and social development. According to the employment situation of each specialty dynamic adjustment, control the development scale of each specialty, for several consecutive years of employment rate employment competitiveness is relatively back of the specialty to stop or turn into other related or similar specialties. And do a good job of graduate tracking survey, according to the supply and demand of graduates' feedback to improve the professional curriculum, improve teaching. Under the existing higher education system, specialization is rigid, but curriculum is flexible, and professional education is ultimately realized through curriculum education. Curriculum construction is the key link in the construction of specialties. The curriculum system of each specialty should be matched with the needs of the society, strengthen the practical teaching link, and set up

the curriculum for the professional requirements of the industry.

(4) In order to strengthen the graduates to broaden the employment destination, set up broad-bore majors for large regions, and cover as many occupational positions as possible with a limited number of majors. The overall process of optimizing the structure of professional settings in higher vocational colleges and universities is shown in Figure 3. At the same time, attention should be paid to the comprehensiveness of the content, as well as the interpenetration between similar majors and disciplines, and the specialization should be set up according to the positions, highlighting the specialization and depth. On the contrary, the breadth of specialization should be emphasized. In addition, the demand for talents with narrow specialized knowledge is relatively low, and the stability of the specialty is poor, which is difficult to develop sustainably and will lead to low efficiency of schooling. Therefore, schools should respond to the talent demand of specific positions in the occupational job groups with a broad-bore and multi-directional specialty setting mode.

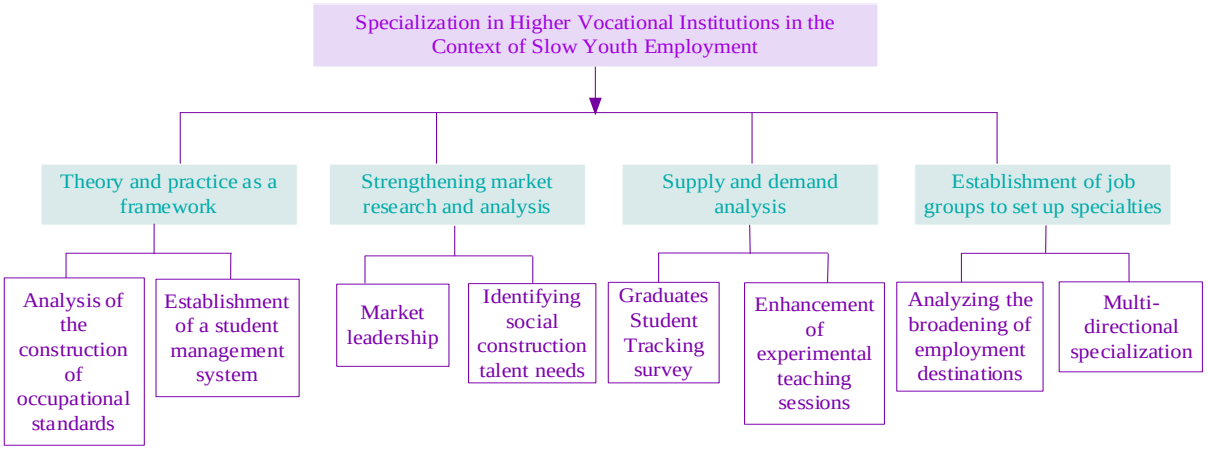

Figure 3: Optimization Structure of Professional Setting in Higher Vocational Colleges

Public factor analysis of specialized courses

The study took 30 students from a class of economic management majoring in the fourth year of a higher vocational college in Liaoning Province as the experimental subjects, and the grades of some of the courses taken in 4 years were used as the raw data, including Advanced Mathematics X1, College English X2, Policies and Laws X3, Microeconomics X4, Macroeconomics X5, Principles of Management X6, Application of Information Technology X7, and Operational Product Marketing X8, and the science was analyzed and analyzed by using the SPS980 statistical software to process the raw data of 10 indicators from 30 samples. The processed data showed that the sampling fitness determination value KMO of Q762 is suitable for factor analysis. Meanwhile, according to the principle that the characteristic root is greater than 1, three public factors are selected, which are basic knowledge factor F1, specialized knowledge factor F2, and practical skills knowledge factor F3.

The results of the corresponding eigen variance contributions of each public factor are shown in Figure 4. The 1st public factor F1 dominates the coefficients of the absolute values of X1, X2 and X3, which reflects the basic knowledge that students majoring in economic management should have, and is called the basic knowledge factor. The factor analysis method of this paper has the highest variance contribution rate of 84.3%, 84.4% and 89.3% in X1, X2 and X3. The 2nd public factor F2 governs the coefficients of the absolute values of X4, X5 and X6, which represent the professional knowledge that the students of economic management should have, so it can be called the professional knowledge factor, and the variance contribution rate of this paper's factor analysis method's in terms of X4, X5, and X6 reaches the highest 87.4%, 89.6%, and 94.2%. The 3rd public factor dominates the coefficient of the absolute value of X7 and X8, which represents the knowledge of practical skills that students majoring in economics and management should have, and it is called the factor of practical skills knowledge, and the variance contribution rate of this paper's factor analysis method in terms of X7 and X8 reaches up to 89.8% and 95.7%. The overall variance contribution rate of the three public factors is comprehensive, and the variance contribution rate is up to 80% or more, the higher the variance contribution rate of the public factors, the higher the degree

of explanation of the data by the factor, that is, the factor of this paper's method can better reflect the structure of the data of the professional courses in higher vocational colleges and universities in the relationship with employment.

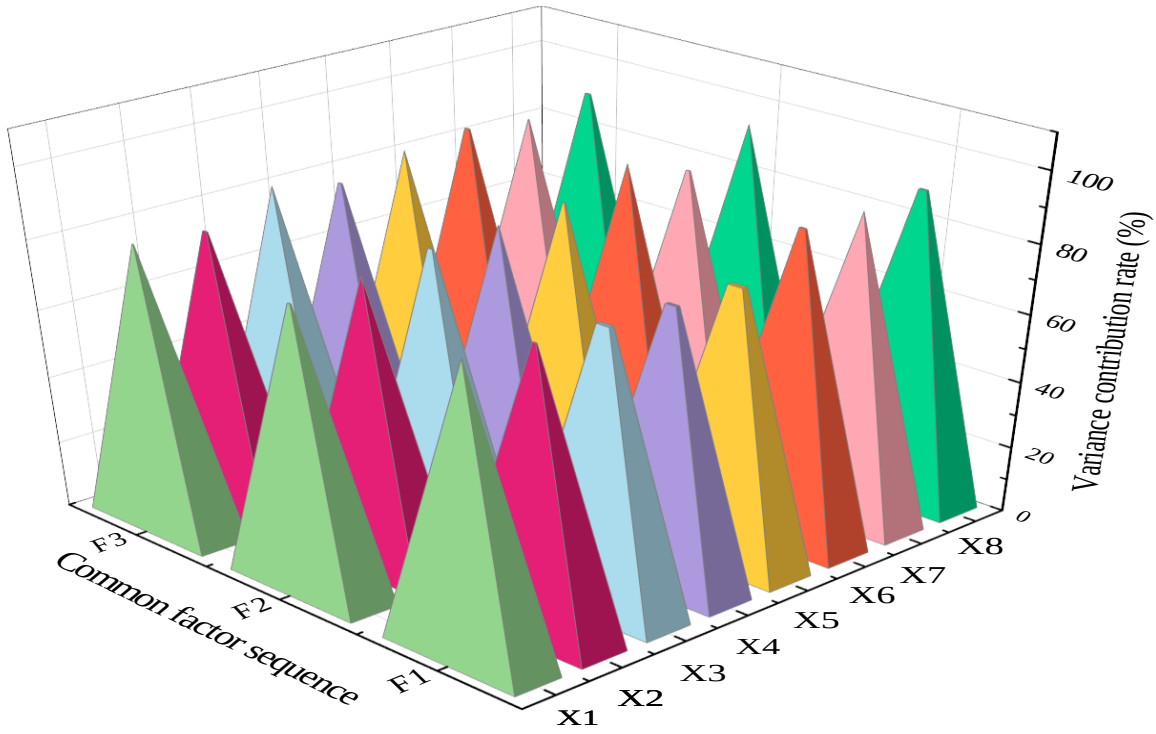

Figure 4: The contribution rate of characteristic variance corresponding to each main factor

Example analysis of employment rate of graduates of higher vocational colleges and universities

In order to test the effectiveness of this paper's method of employment rate of college graduates, still selected a higher vocational college in Liaoning Province as the experimental object, first of all, the employment of fresh graduates of the school in the actual situation of tracking test, in order to prove that this paper's method of whether or not it can improve the employment of college graduates in slow employment problems, the choice of diversity analysis methods, mobile search algorithms, similarity analysis methods, and the principal component analysis method with the method of this paper to carry out the comparison of employment rate of college graduates in the experiments.

Figure 5 shows the prediction accuracy of the relationship between professional course data and employment, and the prediction accuracy of the relationship between professional course data and employment of graduates of higher vocational colleges and universities of this paper's methods all exceeded 93.2%, which is able to model the relationship between the course data and employment of graduates of all colleges and universities with high precision and has good generality. Meanwhile, the average prediction accuracy of diversity analysis method is 75.3%, the average prediction accuracy of mobile search algorithm is 72.6%, the average prediction accuracy of similarity analysis method is 66.9%, and the average prediction accuracy of principal component analysis method is 64.2%, relative to these three methods, the prediction accuracy of the major course data and employment relationship of this paper's method is higher than that of these three methods by about 6.9%-10.3%, which It effectively reduces the prediction error. This is due to the fact that the method of this paper uses Kaiser pointed out that the KMO statistic of factor analysis as a judgment standard, and introduces the variance promax to approximate the maximum variance skewness to analyze it in depth, and accurately obtains the relationship between the data of professional courses and employment in higher vocational colleges and universities, which once again verifies the superiority of the method of this paper in terms of employment in colleges and universities.

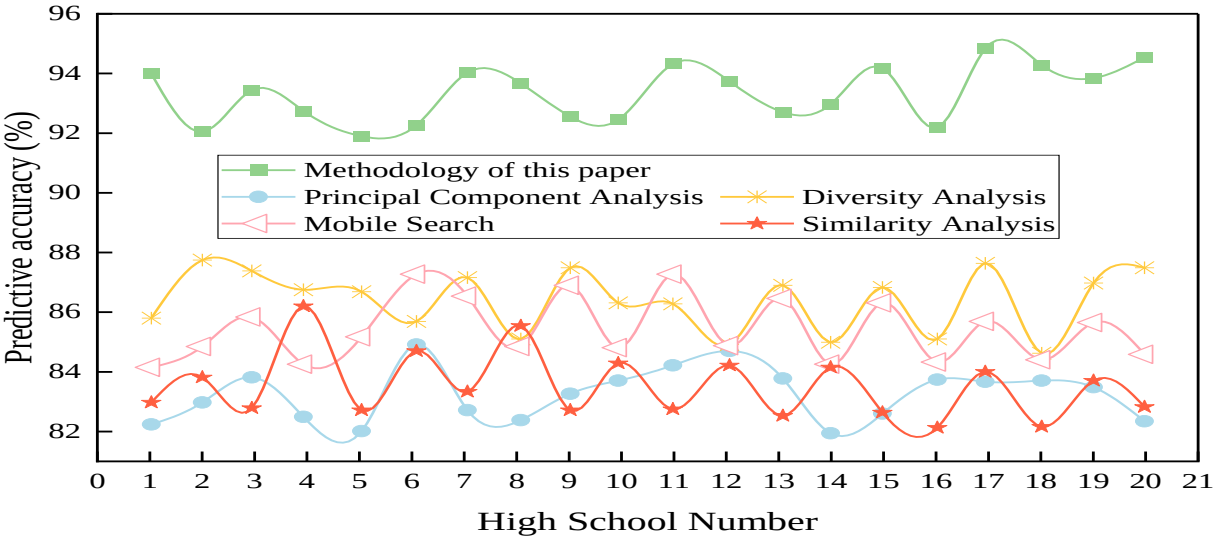

Figure 5: Comparison of prediction accuracy

The results of the comparison of the employment time of graduates of higher vocational colleges and universities are shown in Figure 6, and the shortest employment time using the method of this paper is between 24 days-44 days. The employment time of graduates of higher vocational colleges and universities of diversity analysis method is between 118-121 days, the employment time of graduates of higher vocational colleges and universities of mobile search algorithm is between 83-109 days, the employment time of graduates of higher vocational colleges and universities of similarity analysis method is between 90-110 days, and the employment time of graduates of principal component analysis method is between 145-169 days. The method of this paper in the shortest possible time to complete the employment of students in higher vocational colleges and universities, the optimal effect, this is due to this paper through the professional curriculum for the factor analysis, so that the curriculum of educational technology in the optimization, analysis of the shortcomings in the curriculum, put forward the corresponding curriculum adjustment proposals, respectively, for the theoretical fusion of the actual as a framework, strengthen the analysis of the market research, supply and demand should be demand for the market analysis, the establishment of the job group set up in the context of slow employment of young people as the background of the professional setting to enhance the competitiveness of graduates in employment.

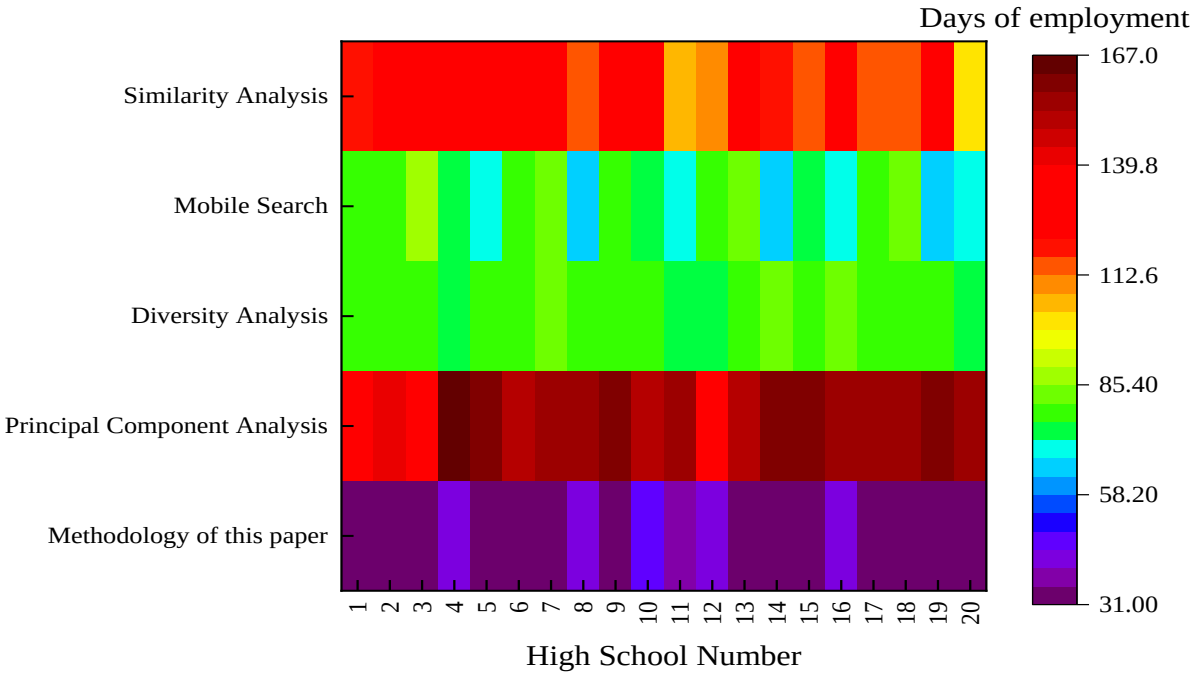

Figure 6: Comparison results of employment time for graduates

Discussion

Higher vocational colleges and universities should uphold a career-oriented approach, provide students with specializations that are closely related to the needs of the actual job market, and emphasize practical teaching so that students can acquire practical skills and experience. It helps students to adapt more easily to the requirements of the workplace after graduation. The future work environment may be more complex and changeable, requiring talents with cross-disciplinary comprehensive abilities. Tertiary institutions can introduce some cross-disciplinary majors to cultivate students' comprehensive qualities, so that young people can better integrate and apply their knowledge in different fields. In the context of slow employment of young people, higher vocational colleges and universities should adjust and expand their professional settings according to the needs of the future occupational market, focusing on cultivating students' practical skills and comprehensive qualities, so as to provide better support for students' successful employment. At the same time, higher vocational colleges and universities can also cooperate with enterprises to carry out internships and employment guidance to create more opportunities for students' career development.

Conclusion

In order to better address the problem of slow employment, an in-depth study of the background and causes is needed in order to provide targeted improvements to the professional curriculum of higher vocational institutions. Firstly, the professional courses of higher vocational colleges are classified according to the depth and chronological order of the courses. Then the index data of professional courses should be standardized so that the average value of the index after transformation is zero, and the eigenvalues and eigenvectors of the relevant indexes should be calculated, the principal components should be selected to determine the weights, and factor analysis should be used to explain the correlation between the existence of the original variables of the stem and to simplify the dimensions and structure of the variables, to validate the issue of the professional courses that affect the slow employment of young people and to put forward the corresponding proposals for adjustment of the course settings.

The variance contribution rate of the F1 public factor of this paper's method is up to 89.3%, the variance contribution rate of the F2 public factor is up to 89.6%, the variance contribution rate of the F3 public factor is up to 94.2%, the prediction accuracy of the relationship between the specialized curriculum data and employment is up to 95.8%, and the employment problem of students in higher vocational colleges and universities is completed in the shortest time. It shows that the research in this paper can adjust and optimize the related majors to enhance the employment competitiveness of graduates and provide effective reference basis for the professional setting of higher vocational colleges and universities.

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