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The Impact Of Graduate Skills And Teacher Quality In China On The Improvement Of College Students' Employment Quality: A Fuzzy Comprehensive Evaluation Method

Sijia Cheng[a], Sabariah Md Rashid[a*], Ruilan Cao[b], Xi Lei[a], Xiaohong Wang[a], Ronghua Zhou[a]

[a]Faculty of Social Science and Liberal Arts, UCSI University, Kuala Lumpur, Malaysia,
Email: 1002163342@ucsiuniversity.edu.my
[a*]Faculty of Social Science and Liberal Arts, UCSI University, Kuala Lumpur, Malaysia
Email: sabariah@ucsiuniversity.edu.my
[b]School of Foreign Languages, Anhui University of Technology, Anhui, China Email: 630080335@qq.com
[a]Faculty of Social Science and Liberal Arts, UCSI University, Kuala Lumpur, Malaysia
Email: 1002162325@ucsiuniversity.edu.my
[a]Faculty of Social Science and Liberal Arts, UCSI University, Kuala Lumpur, Malaysia
Email: 1002162746@ucsiuniversity.edu.my
[a]Faculty of Social Science and Liberal Arts, UCSI University, Kuala Lumpur, Malaysia
Email: 1002162692@ucsiuniversity.edu.my

Abstract:

This study employs the Fuzzy Comprehensive Evaluation Method (FCEM) to examine the influence of Chinese graduate skills and teacher quality on the employment quality of college students, while considering the mediating roles of self-restraint and the external environment. Data pertaining to teacher quality, skill levels, and college student employment quality are comprehensively collected, analyzed, and evaluated. The FCEM analysis reveals a significant positive association between Chinese graduate skills and employment quality, underscoring the positive impact of higher skill levels on employment outcomes. Moreover, teacher quality is identified as a mediator, exerting a substantial influence on college students' employment quality. Self-restraint and external environmental factors are also observed as mediators, contributing to the employment quality of college students.

Keywords: China graduate skills, teacher quality, self-restraint, external environment, Fuzzy Comprehensive Evaluation Method, college student employment quality

1 Introduction

The issue of employment quality for college students has gained significant prominence in contemporary society, particularly due to the expansion of higher education and the growing number of college attendees. This has led to intensified competition in the job market for these students, underlining the need to enhance their employability (Cellini & Turner, 2016; Govindarajan, 2020; Pascoe et al., 2020). To assess the employment quality of college students more effectively, many researchers have turned their attention to the application of the fuzzy comprehensive evaluation method (FCEM). In the realm of evaluating the employment quality of college students, FCEM has become a widely adopted analytical approach. This method involves the creation of a mathematical model that accounts for various uncertain factors, allowing for a comprehensive evaluation of students' abilities, knowledge, professional attributes, and other relevant aspects to yield a relatively objective assessment. FCEM offers a solution to the subjectivity and one-sidedness often encountered in traditional evaluation methods, and it boasts several advantages in accurately gauging the employment quality of college students (Belle et al., 2021; Paulsen & McCormick, 2020).

Various factors can influence the employment quality of college students, with two pivotal elements standing out: graduate skills and teacher quality. In the context of China, graduate skills encompass the professional knowledge, competencies, and overall qualities that college students attain post-graduation, directly affecting their employability and competitive edge (Ahad et al., 2021; Daumiller et al., 2021; Greenier et al., 2021; Veza, 2021; Viano et al., 2020). Teacher quality, on the other hand, encompasses the level of teaching proficiency, professional aptitude, and the capacity to guide students' development. This study places a strong emphasis on nurturing practical skills and fostering an innovative mindset while enhancing the teaching approach by integrating industry-related aspects and conducting more hands-on teaching activities. These measures are effective strategies for bolstering the skills of graduates. Furthermore, elevating teacher quality plays a vital role in enhancing the employment prospects of college students. Exceptional educators can provide valuable educational guidance, offering students increased opportunities and resources, thereby augmenting their professional aptitude and employability (Baluku et al., 2020; Healy et al., 2020).

The utilization of Fuzzy Comprehensive Evaluation Model (FCEM) for analyzing the impact of Chinese graduate skills and teacher quality on the employment quality of college students presents several notable advantages and innovative features. Firstly, FCEM effectively addresses the presence of multiple uncertain variables, mitigating subjectivity and biases commonly encountered in traditional evaluation methods. Secondly, this approach enables the assignment of weights to multiple indicators, facilitating a holistic assessment of all factors through rigorous mathematical models, thereby ensuring a more objective evaluation of college students' employment quality. Lastly, FCEM offers the flexibility to dynamically adapt indicators to real-world conditions, making it adaptable to the specific requirements of different time periods and regions. This method exhibits distinctive innovations and advantages when studying college students' employment quality and holds significant potential for enhancing their overall employment outcomes, Rashid, M. H., Shamem, A. S. M., & Hui, W. (2022).
This study aims to comprehensively review research findings concerning the employment quality, skill levels, and teacher effectiveness of Chinese college students. It also sheds light on the current research results exploring the influence of various factors, including the graduate skills, teacher quality, self-discipline, and external environment, on the employment quality of these students.

2 Literature Review

In recent years, the expanding landscape of higher education in China has been accompanied by heightened competition in the job market, sparking significant concerns regarding the quality of employment for college graduates. This study endeavors to critically review existing research pertaining to the employment quality, skill levels, and teacher quality of Chinese college students. While these studies have made significant strides in understanding these topics, there are still gaps, complexities, and unique contextual factors that warrant more in-depth exploration. This analysis sets the stage for our examination of these individual studies, highlighting their contributions and areas where further investigation is needed.

In this regard, Yan et al. (2019) examined the feasibility of implementing the Australian approach to teaching "soft skills" to Chinese university students. Employing a mixed research methodology involving questionnaires and interviews, the study revealed potential in enhancing the overall quality of Chinese college students. Nevertheless, the cultural and contextual nuances that may impact the applicability of foreign teaching methodologies should be considered.

Sonnenschein & Ferguson (2020) explored the differences in the needs and perceptions of local and international graduates concerning professional communication skills. Through semi-structured interviews and content analysis, the study identified a need for targeted education and training to cater to the distinct requirements of graduates from diverse backgrounds. However, further investigation is required to understand the specific factors influencing these varying needs and the efficacy of tailored education programs.

Habets et al. (2020) investigated the impact of skill development during higher education on graduates' prospects in the 21st-century labor market. While their empirical research emphasized the influence of skills acquired during higher education on future employment and career progression, scrutinizing the specific skills that exhibit the most substantial influence and their transferability across different job sectors should be involved.

Abbas et al. (2020) aimed to identify key employability attributes and assess graduate performance using scale development and verification. While the study provided an effective assessment tool for evaluating graduates' employability, a critical perspective would entail an examination of the limitations and potential biases inherent in such assessments.

Li et al. (2021) evaluated college students' abilities and characteristics through an AI-based teaching evaluation model. The study showcased the potential of machine learning algorithms for assessing student abilities and traits. However, a critical approach would involve discussing the limitations of AI in assessing complex human attributes and the potential ethical concerns associated with such technology.

Lai et al. (2021) revealed the link between air pollution and brain drain among Chinese college graduates, emphasizing the negative impact of pollution on graduates' decisions to leave their original residence. A critical perspective would require a nuanced examination of the causal relationship between environmental factors and migration decisions, considering potential confounding variables.

Du et al. (2022) discussed strategies for cultivating college students' innovation and entrepreneurial ability. While the study proposed effective training strategies, a critical assessment should explore the practical challenges and feasibility of implementing these strategies within the Chinese higher education system.

All in all, the reviewed literature showcases the diversity and depth of research on Chinese college students' employment quality, skill development, and teacher quality. To enhance the employment quality of college graduates, it is imperative to emphasize the cultivation of soft skills and professional communication skills, skills training during higher education, and the assessment of graduate employability. Moreover, the integration of AI and ML technology offers innovative methods for assessing student abilities and personal characteristics, although the limitations of such approaches need critical scrutiny, Rashid, M. H., Ye, T., Hui, W., Li, W., & Shunting, W. (2022). The influence of external environmental factors on students' employment decisions, exemplified by the relationship between air pollution and brain drain, deserves careful examination. Additionally, the positive correlation between teacher experience and teaching quality underscores the pivotal role of educators in improving students' employment prospects. However, future research should delve deeper into the nuances of these relationships to provide more robust theoretical and policy guidance. In conclusion, this study contributes to the exploration of the intricate interplay between China's graduate skills, teacher quality, and college students' employment quality, employing the Fuzzy Comprehensive Evaluation Method (FCEM). By considering the mediating effects of self-restraint and external environmental factors, this research lays a scientific foundation for enhancing the employment quality of college graduates and informing policy decisions.

3 Research Method

3.1 Data Collection

This study primarily sources data from two avenues. First, web crawler technology is employed to gather data from open channels like http://www.eol.cn/ and http://www.univs.cn/ for graduate employment quality reports, employment satisfaction surveys, teacher quality evaluations, and other relevant university data in China from 2018 to 2020 (Jian & Qin, 2020; Liu et al., 2022; Xu & Li, 2020). Second, online questionnaires are distributed to college students and graduates nationwide from October 2020 to January 2021. These questionnaires collect information on basic demographics, Chinese graduate skills, self-discipline, satisfaction with the external environment, innovation, and entrepreneurship abilities. Stratified random sampling was employed, sending out 300 questionnaires and obtaining 279 valid responses (93.0% recovery rate). During data collection, data validity and reliability were prioritized by implementing required questions, logic tests, and outlier elimination. Data security and confidentiality were ensured through encrypted transmission, anonymous processing, and authorized access. Lastly, data timeliness and updatability were maintained by capturing, updating, and monitoring data regularly (Sayaf et al., 2022).

3.2 Measurement of Variables

This study examines five key variables: employment quality, China graduate skills, teacher quality, self-restraint, and external environment, as defined and measured in references (Hafat & Ali, 2022; Megawati et al., 2022). Employment quality assesses graduates' job outcomes, including employment rate, income, satisfaction, and matching. China graduate skills pertain to abilities meeting national and social needs, encompassing professional, general, and innovation skills. Teacher quality involves teaching and research prowess, encompassing faculty structure, academic qualifications, titles, and research achievements. Self-restraint reflects individual control over behavior and emotions. External environment encompasses factors affecting employment, such as economic development, job market conditions, and policy support. The 2021 National Employment Quality Report data were adopted to evaluate and rank these variables by university location.

3.3 Principle and Application of FCEM

FCEM, which stands for Fuzzy Comprehensive Evaluation Method, is a robust assessment approach grounded in the principles of fuzzy mathematics. This method excels at quantifying variables with indistinct boundaries and those that are challenging to measure precisely. By applying the concept of fuzzy relation synthesis, FCEM adeptly tackles a wide range of non-deterministic issues. The methodology comprises several well-defined steps. It commences with the identification of the factor set and the evaluation set related to the object under consideration. Following this, expert opinions or data are utilized to assign a membership degree to each factor for each evaluation level, resulting in the creation of a singlefactor evaluation matrix (Li et al., 2022; Ma et al., 2022). Subsequently, the weights for each factor are determined, culminating in the formation of a weight vector. Finally, the fuzzy relation synthesis operator is employed to combine the weight vector and the single-factor evaluation matrix, yielding the comprehensive evaluation vector, which serves as the conclusive evaluation outcome. This paragraph delves into the principles and specific application processes of FCEM and visualizes the method's structure and workflow in Figure 1.

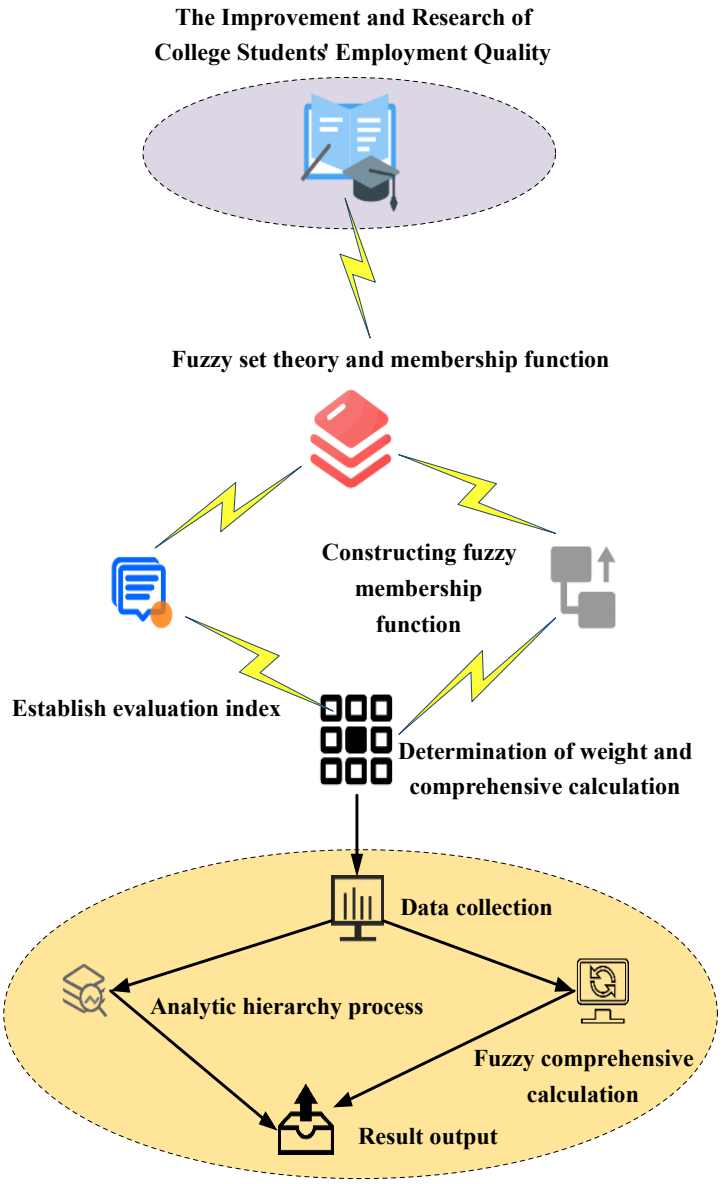

Figure 1 Principle and specific application structure of FCEM

3.4 Analysis of the effect of various variables on employment quality based on FCEM

The objective of this section is to scrutinize the impact of Chinese graduate skills and teacher quality on enhancing the employment quality of college students through the use of the FCEM. In alignment with the research objectives and the data collected, an FCE model is constructed, and empirical analysis is conducted. Initially, the factor set, evaluation subjects, and evaluation criteria are defined (Wang et al., 2022). Evaluation subjects pertain to the influence of various variables on the employment quality of college students, with the factor set encompassing variables such as Chinese graduate skills and teacher quality. The evaluation criteria involve categorizing employment quality into four levels: excellent, good, medium, and poor. Subsequently, a single-factor evaluation matrix is established. By examining the impact of diverse variables on employment quality, the framework of influencing factors for enhancing college students' employment quality is presented in Figure 2.

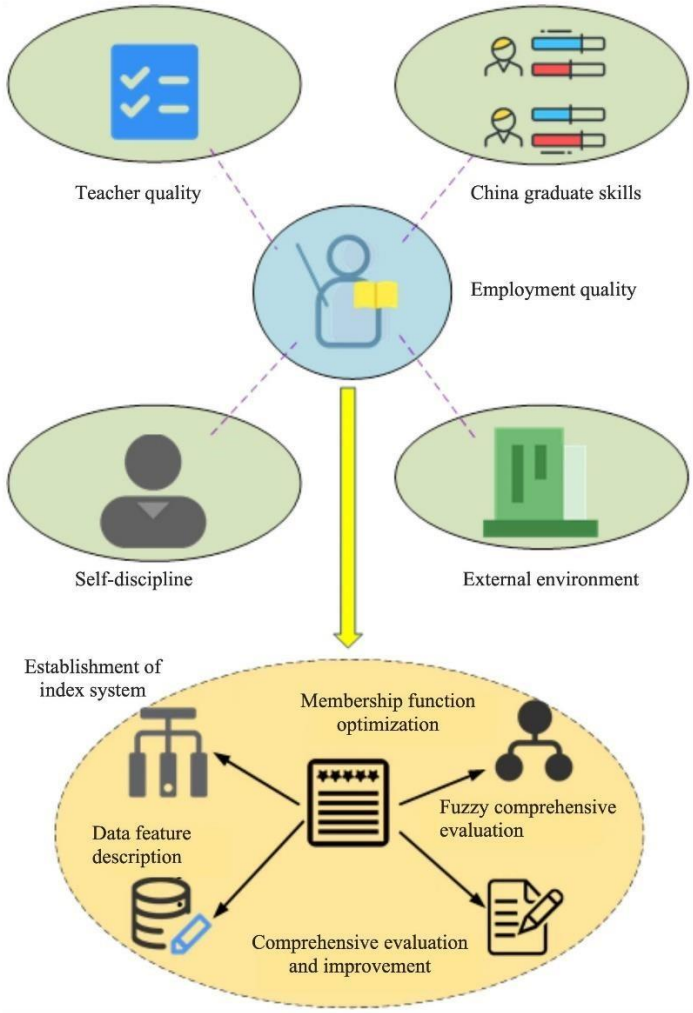

Figure 2 Influencing factors of the improvement of employment quality of college students

Furthermore, to assess the analytical efficacy of the factors influencing employment quality as per the FCEM method proposed in this study, this approach is compared with Principal Component Analysis (PCA), Analytic Hierarchy Process (AHP), Support Vector Machine (SVM), and other analytical methodologies for evaluating employment quality factors. A range of criteria, including college students' comprehensive ability scores, the correlation between skills and employment quality, graduate employment satisfaction scores, teachers' overall quality scores, students' self-discipline scores, external environmental satisfaction scores, innovation and entrepreneurship ability scores, and more, are appraised. Evaluating these indicators offers a comprehensive insight into the effectiveness and advantages of different methods for analyzing the factors influencing employment quality.

4 Research Results

4.1 The relationship between college students' skill level and employment quality

College students' skill level is vital to their employment quality. This section discusses the relationship between college students' skill level and employment quality, and the correlation curves under different model evaluation methods are shown in Figure 3 to Figure 5. Figures 3 and 5 present the variation curve of college students' comprehensive ability score and employment satisfaction score under different model evaluation methods; Figure 4 exhibits the variation curve of the correlation between college students' skills and employment quality with diverse model evaluation methods;

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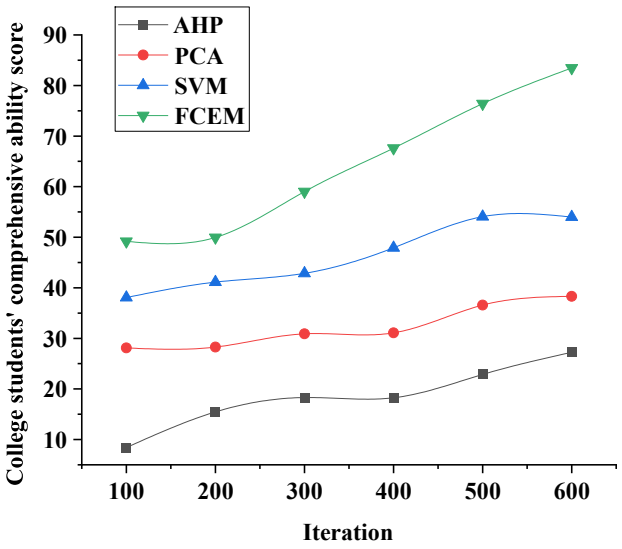

Figure 3 The variation curve of college students' comprehensive ability score with different model evaluation methods
Figure 3 illustrates the incremental rise in scores for the AHP evaluation method, culminating in the highest value following 500 iterations. This observation suggests a positive correlation between the number of iterations and the influence of AHP on the comprehensive ability assessment of college students. Conversely, the PCA evaluation method maintains a consistent score in the initial iterations but demonstrates an upturn after 300 iterations, eventually converging with the AHP score after 600 iterations. This trend implies that PCA might necessitate a more extended iteration period to yield accurate evaluation outcomes.

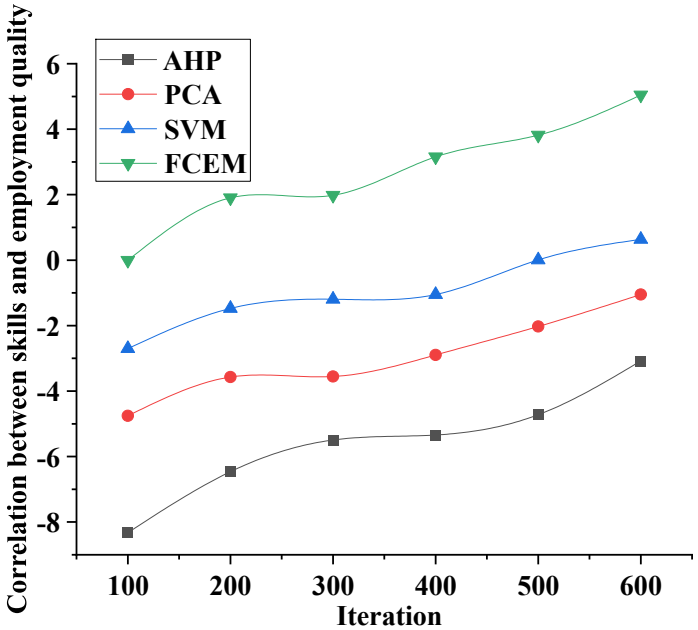

Figure 4 The variation curve of the correlation between college students' skills and employment quality with different model evaluation methods

In Figure 4, the AHP evaluation method reveals a negative correlation score during the initial iteration stage, which gradually converges towards zero as the number of iterations increases. This trend suggests that the AHP method may possess the capability to elucidate the correlation between the skills of college students and the quality of their employment. Conversely, the PCA score exhibits a gradual decrease, ultimately stabilizing, implying a need for enhanced explanatory power in discerning the relationship between college students' skills and employment quality. The SVM evaluation method illustrates a progressive increase in the score with the growing number of iterations, reaching its zenith after 600 iterations. This pattern signifies the relatively substantial impact of FCEM in elucidating the connection between college students' skills and employment quality.

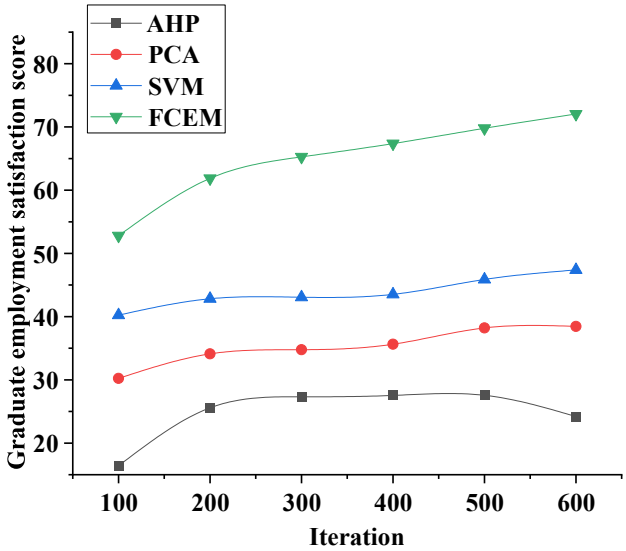

Figure 5 The variation curve of college students' employment satisfaction score with different model evaluation methods

Figure 5 illustrates the impact of two different analytical techniques, AHP and PCA, on employment satisfaction scores. Initially, when AHP is applied, the employment satisfaction score is 16.40. This score gradually increases with each iteration, eventually reaching 24.19. This suggests that AHP possesses a certain capacity to elucidate the employment satisfaction of college graduates. Furthermore, when PCA is employed, the employment satisfaction score exhibits a gradual ascent from 30.24 to 38.45 across 500 iterations, reaching its peak. This indicates that PCA, too, has a positive influence on employment satisfaction scores.

4.2 Effects of different variables on employment quality

This section comprehensively analyzes the impacts of various variables on employment quality. It shows the changing trend of scores of each variable under other model evaluation methods from Figure 6 to Figure 9. Figures 6 and 7 outline the changing trend of teachers' comprehensive quality and college students' self-discipline scores under different model evaluation methods. Figures 8 and 9 portray the variation trend of college students' satisfaction scores with the external environment and their innovation and entrepreneurship ability scores with various model evaluation methods.

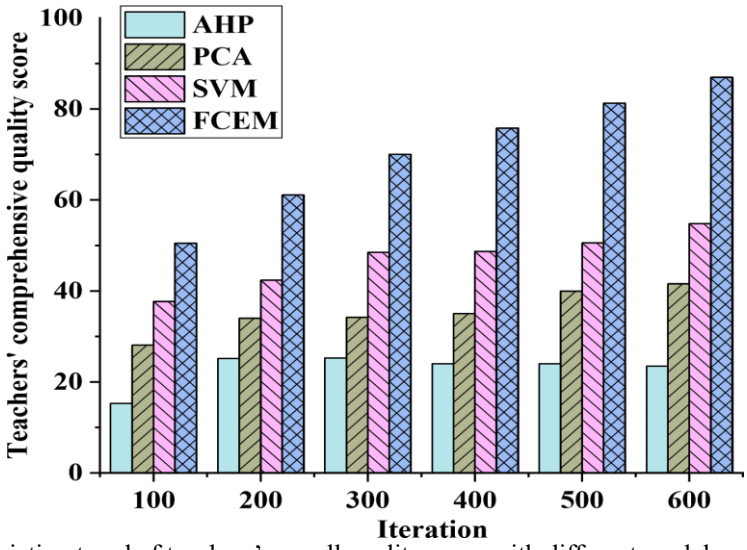

Figure 6 The variation trend of teachers' overall quality score with different model evaluation methods

For the AHP evaluation method, the overall quality score of teachers is 15.32 in the initial iteration stage, gradually increasing to 23.49 with the increase of iterations. This may mean that the AHP has a certain ability to explain the comprehensive quality of teachers. In the PCA, teachers' comprehensive quality score gradually rises from 28.11 to 41.59,

and reaches the highest point after 600 iterations. This indicates that the PCA performs well in evaluating teachers' comprehensive quality. The SVM evaluation method shows that teachers' comprehensive quality score gradually increases from 37.71 to 54.80, showing a steady upward trend. This means that the SVM method has an excellent predictive effect in evaluating teachers' comprehensive quality.

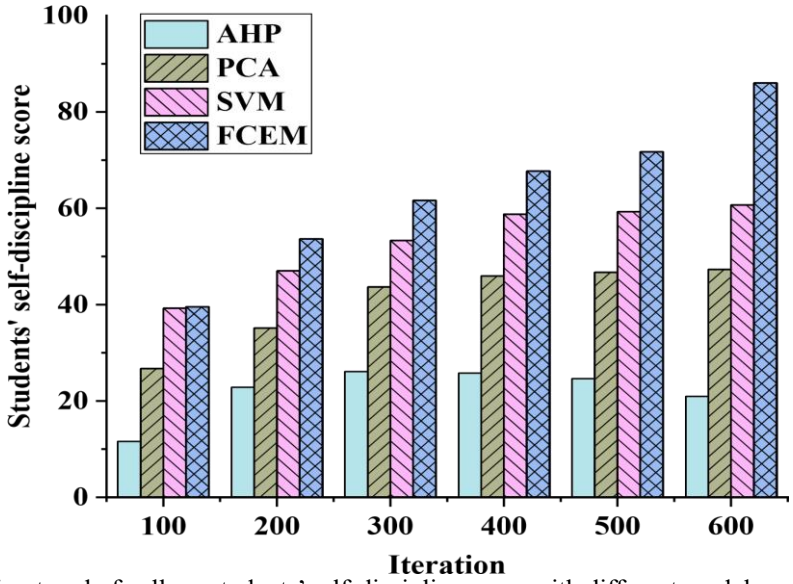

Figure 7 Variation trend of college students' self-discipline score with different model evaluation methods

For AHP, in the initial iteration stage, college students' self-discipline score is 11.66, gradually increasing to 20.93 as iterations rise. This indicates that the AHP has some explanatory ability to evaluate the degree of self-discipline of college students. In PCA, college students' self-discipline score gradually increases from 26.72 to 47.29, and reaches the highest point after 600 iterations. This means that PCA has a good performance in evaluating the degree of self-discipline of college students. The SVM evaluation method shows that the college students' self-discipline score gradually increases from 39.28 to 60.69, which offers a steady upward trend. This illustrates that the SVM method has a good effect in predicting the degree of self-discipline of college students.

Figure 8 Variation trend of college students' satisfaction score with external environment with different model evaluation methods

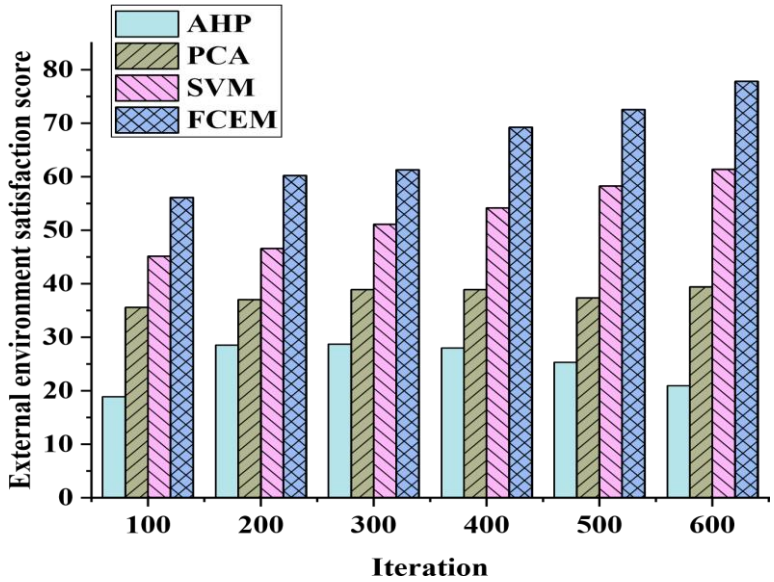

Figure 8 reveals that when the number of iterations is 100 in the AHP model, the satisfaction score is 18.93. When the number of iterations gradually increases, the satisfaction score rises slightly, and when iteration reaches 600, the score is

20.90. Overall, the variation in satisfaction scores is relatively small. In the FCEM model, satisfaction scores change the most. From 100 to 600 iterations, the scores increase from 56.11 to 77.83. In the FCEM model, college students' satisfaction with the external environment increases significantly with the number of iterations.

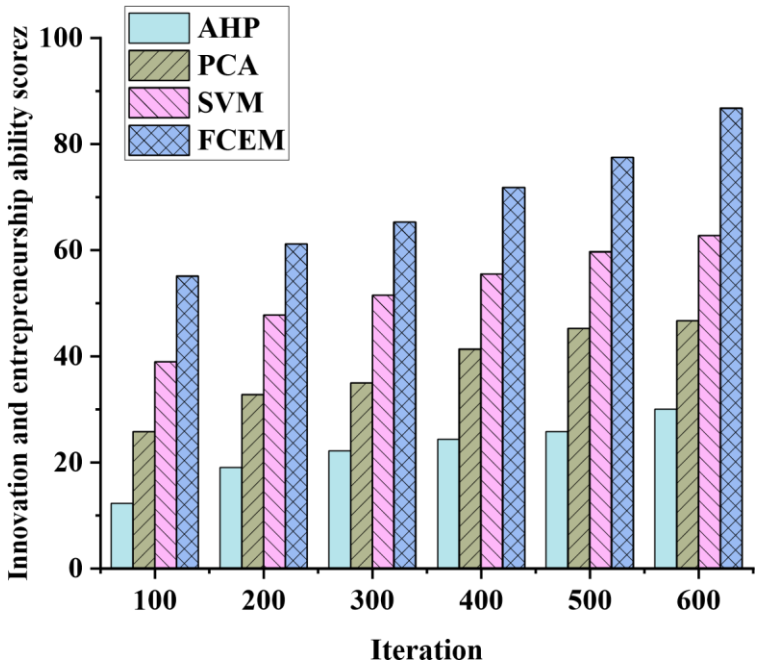

Figure 9 Variation trend of college students' innovation and entrepreneurship ability score with various model evaluation methods

Figure 9 suggests that when the number of iterations is 100 in the AHP model, the innovation and entrepreneurship ability score is 12.27, which gradually increases in the subsequent iteration process and ultimately reaches 29.95. This indicates that the AHP has a specific explanatory power on college students' innovation and entrepreneurship abilities. Regarding specific scores, the FCEM model achieves a higher score (86.72) at 600 iterations. In contrast, the PCA and SVM models have relatively lower scores (46.69 and 62.75). These analysis results will provide a reference basis for selecting suitable model evaluation methods to study college students' innovation and entrepreneurship abilities.

5 Discussion

The analysis of previous research outcomes yields several key insights. Firstly, when assessing the relationship between college students' skill levels and employment quality, it becomes evident that the choice of model evaluation method influences the score variation curves. Notably, the Analytic Hierarchy Process (AHP) demonstrates superior performance after iteration, whereas Principal Component Analysis (PCA) demands more iterations for accurate evaluation. Support Vector Machines (SVM) consistently deliver favorable results across iterations, while the Fuzzy Comprehensive Evaluation Model (FCEM) shows promise. These differences underscore the impact of various evaluation methods on college students' overall competence and graduates' job satisfaction. Careful selection of the appropriate evaluation method is crucial for accurate assessment.

Additionally, the findings of this study are compared to previous research utilizing FCEM. For instance, He et al. (2021) employed multi-stage FCEM to optimize the irrigation and fertilization of cherry tomatoes, achieving significant improvements in yield and fruit quality. Wu et al. (2021) utilized the FCE model to assess the risks associated with offshore wave-wind-solar-compressed air energy storage power stations, highlighting the importance of comprehensive risk management. Zhong et al. (2022) applied AHP and entropy methods in FCE to assess the health risk of groundwater in Yinchuan Basin, revealing the significant risks posed by water quality pollution and declining groundwater levels. These studies collectively demonstrate the efficacy of FCEM across different domains.

This study's primary objectives are to analyze the correlation between Chinese college students' skill levels and employment quality using FCEM and to investigate the influence of teacher quality on students' employment prospects. By judiciously selecting evaluation methods and considering various factors, college students' comprehensive abilities can be accurately assessed, offering valuable insights for optimizing management strategies.

Furthermore, the experiment underscores the impact of various variables on employment quality, including teacher quality, students' self-discipline, satisfaction with the external environment, and innovation and entrepreneurship ability. The results reveal that AHP offers insight into teachers' comprehensive quality and college students' self-discipline. In contrast, PCA excels in evaluating self-discipline and external environment satisfaction among college students. SVM and FCEM demonstrate strong predictive abilities for innovation and entrepreneurship capacity, teachers' comprehensive quality, and college students' self-discipline. These findings offer a comprehensive comparison of different model evaluation methods in assessing college students' overall competence, skills, employment quality, and job satisfaction, as detailed in Table 1.

Table 1 Applications of different model evaluation methods in improving the employment quality of college students

Model evaluation methods	Comprehensive ability score	Scores of correlation between skills and employment quality	Graduates' employment satisfaction scores	Teacher comprehensive quality score	College students' self-discipline score	External environment satisfaction score	Innovation and entrepreneurship ability score
AHP	24.19	0.20	24.19	23.49	20.93	20.90	29.95
PCA	38.45	0.40	38.45	41.59	47.29	38.40	46.69
SVM	54.80	0.61	47.39	54.80	60.69	61.36	62.75
FCEM	87.00	0.87	75.91	87.00	86.04	77.83	86.72

6 Conclusion

This study aims to investigate the relationship between the skill levels of Chinese college students and their employment quality. Furthermore, it seeks to assess the impact of teacher quality on employment outcomes. Four model evaluation techniques, namely AHP (Analytic Hierarchy Process), PCA (Principal Component Analysis), SVM (Support Vector Machine), and FCEM, are utilized to scrutinize the influence of variables like teacher quality and Chinese college student skills on their employment quality. The FCE model is applied, and empirical analysis is conducted by collecting and processing relevant data. The study reveals variations in score change curves under different model evaluation methods. SVM consistently yields favorable results in all iterations, while FCEM demonstrates substantial potential. AHP exhibits high scores after each iteration, whereas PCA requires more iterations to achieve precise evaluation results. The research findings highlight a positive correlation between the skill levels of Chinese college students and the quality of their employment, signifying that higher skill levels are associated with better employment quality. Notably, Chinese graduate skills are a pivotal factor affecting employment quality, with the FCEM indicating a strong positive effect. However, the study does have some limitations, such as potential flaws in the model evaluation methods and other shortcomings that may impact its efficiency and effectiveness. Future research could enhance flexibility and adaptability by refining the model evaluation techniques.

References

1. Abbas, J., & Sagsan, M. (2019). Identification of key employability attributes and evaluation of university graduates' performance. *Higher Education, Skills and Work-Based Learning*, *10*(3), 449–466. https://doi.org/10.1108/heswbl-062019-0075
2. Ahad, R., Mustafa, M. Z., Mohamad, S., Abdullah, N. H. S., & Nordin, M. N. (2021). Work attitude, organizational commitment and emotional intelligence of Malaysian vocational college teachers. *Journal of Technical Education and Training*, *13*(1), 15–21. http://eprints.uthm.edu.my/1340/
3. Baluku, M. M., Mugabi, E. N., Nansamba, J., Matagi, L., Onderi, P., & Otto, K. (2020). Psychological Capital and Career Outcomes among Final Year University Students: Mediating Role of Career Engagement and Perceived Employability. *International Journal of Applied Positive Psychology*. https://doi.org/10.1007/s41042-020-00040-w
4. Belle, M. A., Antwi, C. O., Ntim, S. Y., Affum-Osei, E., & Ren, J. (2021). Am I Gonna Get a Job? Graduating Students' Psychological Capital, Coping Styles, and Employment Anxiety. *Journal of Career Development*, *49*(5), 089484532110201. https://doi.org/10.1177/08948453211020124
5. Cellini, S. R., & Turner, N. (2016). *Gainfully Employed? Assessing the Employment and Earnings of For-Profit College Students Using Administrative Data*. National Bureau of Economic Research. https://doi.org/10.3386/w22287
6. Daumiller, M., Janke, S., Hein, J., Rinas, R., Dickhäuser, O., & Dresel, M. (2021). Do teachers' achievement goals and self-efficacy beliefs matter for students' learning experiences? Evidence from two studies on perceived teaching quality and emotional experiences. *Learning and Instruction*, 101458. https://doi.org/10.1016/j.learninstruc.2021.101458

7. Du, P., Lei, M., & Zhang, X. (2022). Strategies for Cultivating College Students' Innovation and Entrepreneurial Ability. *Journal of Contemporary Educational Research*, *6*(5), 88–95. https://doi.org/10.26689/jcer.v6i5.3863
8. Govindarajan, V. (2020). *Harvard Business Publishing Education*. Hbsp. harvard.edu. https://hbsp.harvard.edu/product/H05HYE-PDF-ENG
9. Greenier, V., Derakhshan, A., & Fathi, J. (2021). Emotion regulation and psychological well-being in teacher work engagement: A case of British and Iranian English language teachers. *System*, *97*, 102446. https://doi.org/10.1016/j.system.2020.102446
10. Habets, O., Stoffers, J., Heijden, B. V. der, & Peters, P. (2020). Am I Fit for Tomorrow's Labor Market? The Effect of Graduates' Skills Development during Higher Education for the 21st Century's Labor Market. *Sustainability*, *12*(18), 7746. https://doi.org/10.3390/su12187746
11. Hafat, S. E. D., & Ali, H. (2022). Literature review determination of work quality and work productivity: Analysis of commitment and work culture . *Dinasti International Journal of Management Science*, *3*(5), 877–887. https://doi.org/10.31933/dijms.v3i5.1227
12. He, Z., Li, M., Cai, Z., Zhao, R., Hong, T., Yang, Z., & Zhang, Z. (2021). Optimal irrigation and fertilizer amounts based on multi-level fuzzy comprehensive evaluation of yield, growth and fruit quality on cherry tomato. *Agricultural Water Management*, *243*, 106360–106360. https://doi.org/10.1016/j.agwat.2020.106360
13. Healy, M., Hammer, S., & McIlveen, P. (2020). Mapping graduate employability and career development in higher education research: a citation network analysis. *Studies in Higher Education*, 1–13. https://doi.org/10.1080/03075079.2020.1804851
14. Jian, Z., & Qin, L. (2020). The application of big data network crawler technology for architectural culture and environment protection. *Concurrency and Computation: Practice and Experience*, *34*(9). https://doi.org/10.1002/cpe.5769
15. Lai, W., Song, H., Wang, C., & Wang, H. (2021). Air pollution and brain drain: Evidence from college graduates in China. *China Economic Review*, *68*, 101624. https://doi.org/10.1016/j.chieco.2021.101624
16. Li, B., Fei, Y., & Liu, H. (2020). An artificial intelligence based model for evaluation of college students' ability and characteristics through teaching evaluation. *Journal of Intelligent & Fuzzy Systems*, 1–11. https://doi.org/10.3233/jifs189378
17. Li, B., Wang, E., Shang, Z., Xu, G., Ali, M., Wang, H., Wu, Q., & Niu, Y. (2022). Quantification study of working fatigue state affected by coal mine noise exposure based on fuzzy comprehensive evaluation. *Safety Science*, *146*, 105577. https://doi.org/10.1016/j.ssci.2021.105577
18. Liu, J., Dong, Y., Liu, Z., & Chen, D. (2022). Applying ontology learning and multi-objective ant colony optimization method for focused crawling to meteorological disasters domain knowledge. *Expert Systems with Applications*, *198*, 116741. https://doi.org/10.1016/j.eswa.2022.116741
19. Ma, L., Xu, Y., Ngo, I., Wang, Y., Zhai, J., & Hou, L. (2022). Prediction of Water-Blocking Capability of Water-Seepage Resistance Strata Based on AHP-Fuzzy Comprehensive Evaluation Method—A Case Study. *Water*, *14*(16), 2517. https://doi.org/10.3390/w14162517
20. Megawati, M., Hamdat, A., & Aida, N. (2022). Examining Linkage Leadership Style, Employee Commitment, Work Motivation, Work Climate on Satisfaction and Performance. *Golden Ratio of Human Resource Management*, *2*(1), 01-14. https://doi.org/10.52970/grhrm.v2i1.86
21. Pascoe, M. C., Hetrick, S. E., & Parker, A. G. (2020). The impact of stress on students in secondary school and higher education. *International Journal of Adolescence and Youth*, *25*(1), 104–112. https://doi.org/10.1080/02673843.2019.1596823
22. Paulsen, J., & McCormick, A. C. (2020). Reassessing Disparities in Online Learner Student Engagement in Higher Education. *Educational Researcher*, *49*(1), 0013189X1989869. https://doi.org/10.3102/0013189x19898690
23. Rashid, M. H., Shamem, A. S. M., & Hui, W. (2022). The position of culture in English language teaching. *Linguistics and Culture Review*, *6*(S2), 43-51. http://www.lingcure.org/index.php/journal/article/view/1908
24. Rashid, M. H., Ye, T., Hui, W., Li, W., & Shunting, W. (2022). Analyse and challenges of teaching writing among the English teachers. *Linguistics and Culture Review*, *6*(S2), 199-209. http://www.lingcure.org/index.php/journal/article/view/2004
25. Sayaf, A. M., Alamri, M. M., Alqahtani, M. A., & Alrahmi, W. M. (2022). Factors Influencing University Students' Adoption of Digital Learning Technology in Teaching and Learning. *Sustainability*, *14*(1), 493. https://doi.org/10.3390/su14010493
26. Sonnenschein, K., & Ferguson, J. (2020). Developing Professional Communication Skills: Perceptions and Reflections of Domestic and International Graduates. *Journal of University Teaching and Learning Practice*, *17*(3). https://eric.ed.gov/?id=EJ1264474

27. Veza, O. (2021). QUALITY OF TEACHER LEARNING IMPLEMENTATION PLAN AND ITS IMPLEMENTATION IN PREPARING VOCATIONAL SCHOOL STUDENTS FOR READY TO WORK. *Technical and Vocational Education International Journal (TAVEIJ)*, *1*(01), 41–48. https://mand-ycmm.org/index.php/taveij/article/view/7 Viano, S., Pham, L. D., Henry, G. T., Kho, A., & Zimmer, R. (2020). What Teachers Want: School Factors Predicting Teachers' Decisions to Work in Low-Performing Schools. *American Educational Research Journal*, *58*(1), 201–233. https://doi.org/10.3102/0002831220930199
28. Wang, X., Liu, L., Zhang, S., & Gao, C. (2022). Dynamic simulation and comprehensive evaluation of the water resources carrying capacity in Guangzhou city, China. *Ecological Indicators*, *135*, 108528. https://doi.org/10.1016/j.ecolind.2021.108528
29. Wu, Y., & Zhang, T. (2021). Risk assessment of offshore wave-wind-solar-compressed air energy storage power plant through fuzzy comprehensive evaluation model. *Energy*, *223*, 120057. https://doi.org/10.1016/j.energy.2021.120057
30. Xu, L., & Li, Z. (2020). A New Appraisal Model of Second-Hand Housing Prices in China's First-Tier Cities Based on Machine Learning Algorithms. *Computational Economics*. https://doi.org/10.1007/s10614-020-09973-5
31. Yan, L., Yinghong, Y., Lui, S. M. (Carrie), Whiteside, M., & Tsey, K. (2018). Teaching "soft skills" to university students in China: the feasibility of an Australian approach. *Educational Studies*, *45*(2), 242–258. https://doi.org/10.1080/03055698.2018.1446328
32. Zhong, C., Yang, Q., Liang, J., & Ma, H. (2022). Fuzzy comprehensive evaluation with AHP and entropy methods and health risk assessment of groundwater in Yinchuan Basin, northwest China. *Environmental Research*, *204*, 111956. https://doi.org/10.1016/j.envres.2021.111956
33. Rashid, M. H., Shamem, A. S. M., & Hui, W. (2022). The position of culture in English language teaching. *Linguistics and Culture Review*, *6*(S2), 43-51. http://www.lingcure.org/index.php/journal/article/view/1908
34. Rashid, M. H., Ye, T., Hui, W., Li, W., & Shunting, W. (2022). Analyse and challenges of teaching writing among the English teachers. *Linguistics and Culture Review*, *6*(S2), 199-209. http://www.lingcure.org/index.php/journal/article/view/2004