

Designing an Assessment Model for Teaching in Vocational Undergraduate Colleges in China

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Abstract

The purposes of this research were: 1) to investigate the components and indicators of teaching assessment for vocational undergraduate colleges, 2) to explore the actual state, expected state, and Priority Need Index of teaching assessment for vocational undergraduate colleges, 3) to design the teaching assessment model for vocational undergraduate colleges, and 4) to assess the suitability and feasibility of teaching assessment model for vocational undergraduate colleges.

This study used mixed methods including literature review, expert interviews, questionnaires, data analysis, and connoisseurship. Questionnaire was developed with a sample of 378 teachers from 33 vocational undergraduate colleges in China, and the sampling survey method was used to understand the current state and expected state of vocational undergraduate colleges. The findings of this study were as follows:

1. The teaching assessment of vocational undergraduate colleges contains 6 components and 29 indicators.

2. The actual state and expected state of the components and indicators for vocational undergraduate colleges were at the high level. The needs of the components from high to low were: teaching construction and reform teaching faculty, teaching quality management, teaching conditions and utilization, teaching effect, and vocational skills accumulation.

3. Teaching assessment model for vocational undergraduate colleges was comprised. The teaching assessment model for vocational undergraduate colleges, including the assessment concept, assessment subjects, assessment contents, assessment methods, and application of assessment results.

4. The suitability and feasibility of the teaching assessment model for vocational undergraduate colleges were at the very high level.

Keywords: Teaching Assessment; Model; Vocational Undergraduate College; China

Introduction

As China enters the era of information technology, with the rapid development of new-generation information technology, artificial intelligence, big data and block-chain technologies has led to an escalation in the quality, structure and level of human resources, and the low-skilled labor of the past, which had been "low-threshold and all-inclusive," is not applicable to the emerging technology industries (Shi Hongwu, 2023: 14). The high-quality development of vocational education is receiving more and more attention. In recent years, the State has issued a series of documents, such as the New Vocational Education Law and the Overall Plan for Deepening the Reform of Educational Assessment in the New Era, to encourage the development of vocational education at multiple levels and forms (Yan Cailing, 2021: 33), promote diversified school running, support the broad and equal

participation of social forces in vocational education, and change the level of higher vocational colleges from a single level of specialization to a specialization, bachelor's degree, postgraduate and other Multi-level vertical modern vocational education system (Xiong Wenlin & Wang Mengying, 2023: 40).

The development of vocational undergraduate education, raising the level of vocational colleges, and the formation of a "closed loop" of students' academic qualifications is also important responsibilities to meet the current demand for diversified talents, pass on technical skills, and promote employment and entrepreneurship (Zhao Wei & Jiang Bo & Wang Yanping, 2023: 106).

The document "Opinions on Promoting the High-Quality Development of Modern Vocational Education" proposes that as of 2025, enrollment in vocational undergraduate education should not be less than 10 percent of enrollment in higher vocational education (Cheng Zhaoyu, 2023: 19). Quality is the lifeline of higher education, and conducting higher education assessment is a realistic need to guarantee and improve the quality level of China's higher education (Yu Xiaobo & Chen Yiran & Zhang Huanhuan, 2022: 62).

In the field of higher education, it is clearly proposed to "promote the classification and assessment of colleges" and "strengthen and improve the assessment and monitoring of education". Teaching assessment is a quality assurance system for higher education in China that has been continuously promoted for 40 years, and it is a comprehensive management tool for the government to manage the quality of higher education and supervise the implementation of various education policies by colleges (Pang Yi & Sun Zhenbao, 2024: 120). In 2003, China first launched a five-year round of undergraduate teaching work level assessment, and thus began the vigorous development of higher education assessment (Wei Jianjian, 2014: 1). Teaching assessment is related to the direction of the development of education, what kind of assessment baton, what kind of school-oriented. Therefore, "good teaching assessment" has become the value scale to scrutinize the practice of higher education assessment (Du Ruijun, 2021: 24).

According to the State Council's 2020 Overall Plan for Deepening Educational Assessment Reform in the New Era, vocational undergraduate education has strengthened the top-level design of assessment by changing the previous erroneous assessment system in the field of vocational education, which emphasized professional skills and emphasized moral education, and has perfected the standards for the awarding of degrees and the assessment mechanism that are in line with the development of vocational education. (Wu Qiuchen & Xu Guoqing, 2023: 34). In June 2013, China has become a signatory to the Washington Agreement, and the assessment concept emphasizing "student-centeredness, output orientation,

and continuous improvement" has gradually become the direction of China's higher education teaching reform, and the ideological, institutional, and cultural force driving the improvement of the quality of professional education in colleges.

The teaching assessment should focus on the goals of balanced accountability and continuous improvement and follow the basic laws of educational development. Currently, vocational education is being transformed from quantity to quality through such programs as the Action Plan for Improving Quality and Excellence, the Double-High Program, and the Three-Teaching Reform, as well as through the adoption of such measures as the Modern Apprenticeship System and the 1+X Certificate System, which are aimed at promoting apprenticeships with Chinese characteristics, and at cultivating high-quality laborers and technical and skilled personnel.

However, it is still in its infancy, the assessment of the teaching quality of vocational undergraduate colleges is not perfect, and the assessment theory and practice are in the stage of transplantation, exploration and creation. In order to avoid "academic drift" and ensure the quality of talent training, it is therefore urgent to establish a teaching assessment model that highlights the characteristics of vocational undergraduate colleges, so as to improve the mechanism for educating people with moral and technical skills and combining engineering with education, and to ensure that the teaching in vocational undergraduate college is carried out strictly in accordance with the teaching standards of the vocational undergraduate education in the teaching process, so as to cultivate high-level technical talents.

Research Objective

To design the teaching assessment model for vocational undergraduate colleges.

Research Methodology

The long-term development of vocational undergraduate education as a newborn affair, it is necessary to further standardize the educational management of vocational undergraduate colleges. The main task of this study is to establish a teaching assessment model for vocational undergraduate colleges, so as to improve the quality of vocational undergraduate education, prevent vocational undergraduate academic drift, and improve the characteristics of vocational undergraduate colleges. The study is carried out in four stages:

Design the Teaching Assessment Model for Vocational Undergraduate Colleges

The uses qualitative research, and the researchers use the results of the second phase as a guide for expert interviews to determine how to design appropriate teaching assessment model for vocational undergraduate colleges, and the researchers implement the research in the following order:

1.The Informant

The expert interview method is used to guide the assessment, and select 9 experts including policy decision makers, enterprise leaders, teachers, and scholars.

1.1 policy decision makers with the following qualifications: employment in government education departments and knowledge of relevant government staff in vocational undergraduate institutions.

1.2 faculty members with the following qualifications: more than five years as a full-time faculty member of a college or university.

1.3 scholars with the following qualifications: researchers in the field of educational management with the title of associate professor.

1.4 enterprise leaders, with the following qualifications: a leadership in the enterprise, and also is a part-time teacher in a vocational undergraduate college.

2. The Content

Using a qualitative research methodology, an interview outline was developed based on the states of needs obtained from Phase 2, and in-depth one-on-one interviews were conducted with experts.

2.1 Teacher faculty

2.2 Teaching conditions and utilization

2.3 Teaching construction and reform

2.4 Teaching quality management

2.5 Teaching effect

2.6 Vocational skills accumulation

To invite 9 experts to conduct full exchanges and discussions on how to select and produce assessment components and indicators. Sort out each expert's thoughts and opinions on the assessment of vocational undergraduate education.

3. Research Tools

Expert interview method: Semi-structured method is the main method.

3.1 The components and indicators of teaching assessment in vocational undergraduate colleges are used as a framework to determine the interview outline. At the same time, send the interview outline to the tutor first to get feedback and support from the advisor.

3.2 Send the confirmed interview outline to the experts in advance, so that the experts have enough time to think and get more feedback.

4. Data Collection Methods

4.1 By obtaining the recommendation of the school's research ethics committee. To seek support from schools, government education management departments, friendships, etc., and determine a list of experts for interviews.

4.2 Contact the appointment time and place by telephone or communication network in advance, inform the interview content in advance, and distribute the interview outline to the interviewee in advance if conditions permit. If individual experts are interviewed by telephone or written interviews due to location, work, etc.

4.3 Bring computers, mobile phones, laptops and other tools, prepare an interview outline, and visit relevant experts on the spot.

5. Data Analysis

5.1 Collect and analyze the content analysis of the interviews, use qualitative research methods, sort out the data of the interview records, and sort out the key points: first, retain the original content of each expert; The second is to focus on reflecting the core views of each expert. In order to conduct an inductive analysis of the follow-up study, the researchers classified the interview outline of each expert into thematic categories, and classified the interview data of all experts.

5.2 Organize and summarize, and write a summary of interviews, so as to fully understand the experts' suggestions and opinions on the teaching assessment indicators of vocational undergraduate colleges.

6. Ethics of the Research

The researchers protected the rights of respondents based on the following measures:

6.1 The researcher introduces himself and introduces the purpose of the interview and the direction of the results to the interviewee, so as to ensure that the interview time is compressed to 1-2 hours, which will not affect the respondent's working time.

6.2 The researcher assures the interviewee that the information in this interview is protective and rigorous, and will not disclose the basic information such as the interviewee's name. Information such as audio recordings of interviews will not be disseminated externally.

Research Framework

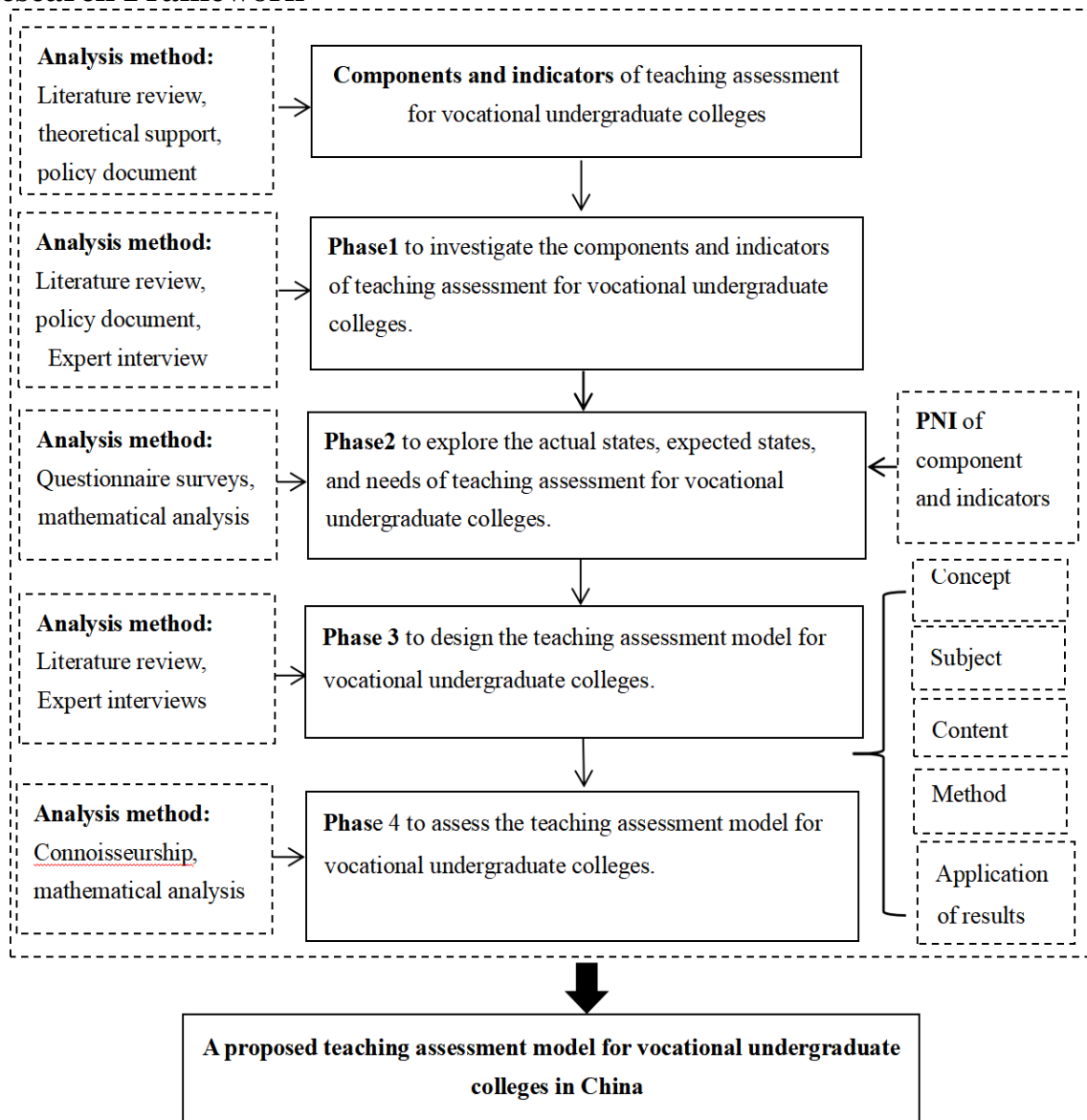


Figure 1. Research Scope

Research Findings

The reason for this research on the teaching assessment mode of vocational undergraduate colleges in China is that the current vocational undergraduate education in China is in a critical period of initial and rapid development. Teaching assessment is an important guarantee to ensure the talent training and teaching quality of vocational undergraduate colleges. The entire results of this research were reported according to the research questions sequence as follows:

1. The teaching assessment model for vocational undergraduate colleges, including the concept of assessment of vocational undergraduate colleges, assessment subjects, assessment contents, assessment methods, and application of assessment results.

1.1 Vocational and practicality are the most important features of vocational undergraduate education, which can satisfy the needs of enterprises and society for technical talents to the greatest extent. The assessment concept should fully reflect the value orientation of vocational and practicality of teaching in vocational undergraduate colleges. Vocational undergraduate education promotes the sustainable development of the integration of higher education, vocational education and continuing education.

1.2 Construct a diversified assessment subject based on the main characteristics of stakeholders, including schools, government education administration departments, enterprises and institutions employing personnel, teachers, students, parents and other subjects. The teaching assessment of vocational undergraduate colleges should strengthen the main position of enterprises and institutions as the demand side of employers. At the same time, the introduction of third-party assessment organizations should be explored in order to promote the goal of separating "management, operation and assessment".

1.3 The assessment content is mainly composed of assessment components and indicators. The establishment of an indicator system centered around the whole process of teaching development as the main content consideration, including six components and 29 indicators, with a strong emphasis on sustainability in terms of students' skills development, and teaching assessment focusing on teaching inputs, teaching outputs and teaching assessment.

1.4 Assessment methods should strengthen the breadth and depth of modern information technology in the teaching assessment of vocational undergraduate colleges, and establish an information platform for teaching assessment, so as to change the original single assessment method to a multifaceted assessment method combining online and offline in terms of assessment methods. The online platform is used to collect and provide assessment data and reports, which can be viewed by the assessment expert team in advance according to the needs, while the offline assessment in schools is mainly based on field visits and interviews according to the actual needs. In addition, emphasis has been placed on the training and requirements for assessment experts to enhance their assessment-specific capacity.

1.5 Vocational undergraduate colleges should be problem-oriented thinking, focusing on the use of assessment conclusions, discovering problems, analyzing problems, solving problems, through the assessment of the "pulse, diagnosis, prescription", the formation of the dynamic development mechanism of spiral upward, so as to achieve the purpose of "promoting construction through assessment".

Discussion

The overall of this research result was discussed based on the research question as follows:

Design the teaching assessment model for vocational undergraduate colleges. Results of the research found that the teaching assessment model are consisting of :1) concept, 2) subject, 3) content, 4) method, 5) application of assessment results.

As Niu Jincheng (2013: 13-17) proposed that the logic of the research assessment scheme is the overall synthesis of the five elements of "who will assess, why to assess, what to assess, how to assess, and how to deal with the results".

The teaching assessment concept of vocational undergraduate colleges is reflected in the value orientation of "vocational" and "practical". Vocational undergraduate education is embodied in the combination of academic, technical and vocational education, and improving students' social adaptability and vocational skills is the key to talent training in application-oriented undergraduate colleges. Wang Lei & Jin Xianghai (2019: 68-72) proposed that vocational education at the undergraduate level in China should first pay attention to practical application, not only at the theoretical level, but also explore more practical results. Secondly, it is necessary to create the characteristics of vocational education at the undergraduate level, which are different from junior college education and undergraduate education.

The teaching assessment of vocational undergraduate colleges establishes a teaching quality assurance system in which the government, schools, employers, society and other subjects jointly participate, and fully mobilizes the enthusiasm and initiative of all subjects to participate in the cultivation of vocational talents. Li Li (2017: 58-62) proposed that the assessment subject should pay attention to stakeholders, take the government education department and the assessment school as the assessment body, and fully consider the assessment participation of enterprises and employers.

The assessment content reflects career-oriented vocational education at the undergraduate level. In the process of talent training, we pay attention to the assessment of talent training positioning, the proportion of practical teaching, the implementation of engineering and learning alternately, and the technical skills competition. In terms of social services, colleges focus on vocational (social) training, integration of industry and education, technical services, and achievement transformation. In terms of teachers' scientific research, Shi Weiping, Lan Jinlin, Liu Xiaotian (2021: 99-104) proposed that we should pay attention to the assessment of teachers' horizontal topics and patent research and development, increase teachers' practical experience and ability to understand industry enterprises and local economies, and comprehensively assess the educational quality and college functions of vocational education at the undergraduate level from multiple dimensions.

With the development of information technology, the teaching assessment method of vocational undergraduate colleges adopts a combination of online and offline methods. The State shall establish a national data platform for monitoring the quality of higher education and employment quality data, analyze the status of data through information technology, and establish an open and shared assessment management service system to promote the organic integration of information technology and teaching assessment. Yang, B. C. (2021: 35). proposed that on-site assessment experts and third-party institutions entered the school and conducted the assessment by means of consulting materials, field visit, and conducting in-depth interviews.

After the assessment expert group gives feedback on the assessment conclusions, a diagnostic plan is formed, and the school seeks a solution. Li Xianzheng (2022: 67) proposed to build a generation of assessment conclusions based on the “exchange, communication and consultation” between the assessment expert group and the school, and the application of assessment conclusions based on the goal of “spiraling” development, and continuously form a sustainable development assessment improvement mechanism through "pulse, diagnosis, and prescription".

Suggestion

1.Theoretical Recommendation

1.1 Vocational undergraduate colleges are in the process of continuous improvement of theoretical exploration and practical application, and should pay attention to the teaching characteristics of the school in the process of use.

1.2 By making profound international comparisons and gaining a comprehensive understanding of the development status of vocational undergraduate teaching in other countries, the theoretical depth of the teaching assessment model of Chinese vocational undergraduate colleges can be further improved.

1.3 Teaching assessment can be more targeted in the structure of questionnaire samples: firstly, the questionnaire samples of teachers with high-level titles can be increased, and secondly, the questionnaire samples from students can be increased.

2.Policy Recommendations

2.1 Promote the teaching assessment model of vocational undergraduate college and apply it in practice.

2.2 Further connection between the teaching assessment of vocational undergraduate colleges and the current supervision and assessment of higher vocational colleges, and further integration with the internal quality assurance system of colleges.

2.3 Compared with the field of basic education and higher education, the differences between vocational undergraduate colleges are further highlighted.

2.4 Based on the "student-oriented" assessment, it further reflects the teaching characteristics of vocational undergraduate colleges

3. Practical Recommendations

3.1 The teaching assessment of vocational undergraduate colleges can be used to integrate the dilemmas, so as to pay attention to the degree of coherence of "raising problems, analyzing problems and solving problems".

3.2 Teaching assessment of vocational undergraduate colleges in terms of assessment concept, assessment subject, assessment content, assessment methods, the use of assessment conclusions, etc., to put forward the strategic plan of path selection for the reference of assessment.

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