



Research on the Construction of Evaluation Indicators for the Competitive Advantage of Newly Established Majors in Higher Vocational Colleges

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Abstract

Based on the relevant policy documents and the research results of scholars, this study deeply discusses the research field of "Assessment Indicators for the Competitive Advantage of Newly Established Majors in Vocational Colleges". First of all, the government has clearly put forward the goal of serving international production capacity cooperation in the vocational education reform, encouraging vocational schools to actively participate in the internationalization process, in order to enhance the reputation and influence of China's vocational education in the international arena. Furthermore, scholars also emphasized the importance of performance evaluation self-evaluation indicators in the evaluation of higher vocational colleges, especially the necessity of multi-dimensional selection of alternative self-evaluation indicators, including output, benefit, and satisfaction. In addition, this study is not only based on the current policy guidance documents for the professional setting of higher vocational colleges in China, but also combines the research results of relevant scholars, and adopts a variety of research methods, such as in-depth interviews, expert interviews, Delphi method and fuzzy Delphi method, to develop evaluation criteria including 5 first-level indicators and 24 second-level indicators. These criteria will become a powerful reference and decision-making basis for higher vocational colleges to re-study, plan, and set up new majors in the future. Finally, the aim of this study is to provide a systematic basis for self-evaluation and a scientific standard for the establishment of new majors in higher vocational colleges. Through the establishment of these evaluation indicators, higher vocational colleges will better meet the needs of society and industry, improve the quality of education, and thus enhance their competitiveness in international competition. This study provides practical reference and useful guidance for the sustainable development and internationalization process of China's higher vocational colleges and is helpful in promoting the further development of China's vocational education.

Keywords

New major establishing, Competitive advantage, Evaluation indicators

1. Introduction

The United Nations Educational, Scientific and Cultural Organization (UNESCO) has been recognized as a valuable

global resource and advocacy tool for promoting informed dialogue and raising public awareness of the central role of education in achieving sustainable development. According to the Global Education Monitoring Report, this organization is dedicated to addressing various challenges in achieving quality, equity, and inclusive lifelong learning for all by 2030.

The 2030 Sustainable Development Agenda calls for the international community to adopt comprehensive and coordinated solutions to address contemporary social, economic, and environmental challenges. Against this backdrop, in January 2019, the State Council of China issued the "National Plan for Implementing Vocational Education Reform," which provides essential guidance for the deepening of vocational education reform. This plan explicitly recognizes the distinct status of vocational education compared to general education, considering them as two equally important types of education.

The "National Plan for Implementing Vocational Education Reform" also explicitly mentions that as China enters a new development stage, industrial upgrading and economic structural adjustments are accelerating, leading to an increasing demand for technical and skilled talent across various sectors. Consequently, the importance and role of vocational education have become increasingly prominent, aligning with the goals of the United Nations Educational, Scientific and Cultural Organization (UNESCO). China's reform efforts in the field of education contribute positively to addressing global education challenges and advancing sustainable development goals.

In summary, UNESCO's mission aligns with the 2030 Sustainable Development Agenda, and China's efforts in vocational education reform provide strong support for achieving this objective. By promoting global educational cooperation and improving the quality of education, we can better address challenges in the realms of society, economy, and the environment, paving the way for a sustainable future for all humanity.

Therefore, the purpose of this study is to deeply study the relevant work of UNESCO and the relevant documents in the field of vocational education reform in China, so as to build a new "professional advantage competitiveness evaluation index system of higher vocational colleges". The researchers hope that this study can provide more specific and practical guidance and implementation methods for higher vocational colleges in the ever-changing market demand for higher vocational education and the development and supply of talents. The goal of this research is to help higher vocational colleges better adapt to the changes in the educational environment, improve their educational quality to meet the needs of society and promote the sustainable development of talent training and supply.

2. Literature Review

The literature review on the "Study of Constructing Assessment Indicators for the Competitive Advantage of Newly Established Majors in Vocational Colleges" can encompass several aspects, including:

2.1 UNESCO Educational Philosophy and Objectives

UNESCO advocates a comprehensive approach to education, encompassing primary education, vocational education, and lifelong learning, to cater to individuals of all ages and needs. This holistic approach to education contributes to enhancing individual skills, knowledge, and overall competencies, providing robust support for personal growth and societal progress.

Furthermore, UNESCO places special emphasis on the crucial importance of education quality. They believe that education should meet high standards to ensure that learners acquire valuable knowledge and skills. High-quality education serves as the cornerstone of sustainable development, fostering creativity and innovation while enhancing the overall competitiveness of society. Additionally, UNESCO recognizes the close connection between education and sustainable development, considering it a vital means to achieve global sustainable development goals.

Therefore, one of UNESCO's objectives is to promote the achievement of sustainable development goals through education, ensuring that education not only supports individual development but also makes a positive contribution to the prosperity of society, nations, and the global community.

2.2 Characteristics and needs of higher vocational colleges in China

When analyzing the characteristics of vocational colleges in China and the educational market demands, it is crucial to first consider the policy context of vocational education reform in China. This context encompasses the country's development plans, government-issued policy documents, and reform measures related to vocational colleges. Additionally, a comprehensive understanding of the needs of industries and students is necessary, as it aids in identifying the key factors that should be considered in the evaluation indicators.

These policy documents and reform measures not only reflect the government's emphasis on vocational education but

also provide crucial guidance and direction for the construction of evaluation indicators for the competitive advantage of newly established majors. By conducting in-depth research into the policy context and demands, we can gain a better understanding of the challenges and opportunities that vocational colleges face. This, in turn, provides robust support for the development of evaluation indicators.

2.3 Relevant Research at Home and Abroad

An article published in Xinhua Daily in August 2023, titled "Innovative Ideas and Models Promote the Internationalization of Higher Vocational Education," points out that in the central government's policy document "Opinions on Promoting the High-Quality Development of Modern Vocational Education," it is explicitly stated that there is a need to serve international capacity cooperation. This policy encourages vocational schools to actively participate in the internationalization process of Chinese enterprises and actively establish a group of vocational schools with high-level international characteristics. This involves formulating a series of international standards, curriculum standards, and teaching resources to enhance international influence.

Furthermore, scholars such as Cai Meng (2022) mentioned the establishment of self-evaluation indicators for the performance evaluation of the national "Double High-Level Plan". They emphasize that schools need to set their own self-evaluation indicators based on policy orientation, principles, and key points analysis. They have selected multi-dimensional alternative self-evaluation indicators, including output indicators, efficiency indicators, and satisfaction indicators, constructing over eighteen tertiary-level indicators.

On the other hand, Sun Yan (2019) proposed a classification evaluation discussion on the competitive strength of majors in vocational colleges. He pointed out that the competitive strength of majors in vocational colleges is the ability to achieve resource optimization and sustained competitive advantage, which comprehensively reflects the teaching quality and teaching capabilities of higher vocational colleges.

Therefore, this study will draw extensively from the aforementioned policy directions and scholarly research outcomes, aiming to propose a framework for the construction of evaluation indicators for the competitive advantage of newly established majors in vocational colleges. These indicators can serve as a basis for self-evaluation and measurement when vocational colleges are setting up new majors, providing practical guidance and a foundation for such endeavors.

2.4 Methods for Constructing Evaluation Indicators

Evaluation indicators have wide-ranging applications in the fields of education and research, playing a crucial role in assessing and enhancing the quality and effectiveness of various educational and research activities. In the academic research domain, evaluation indicators are extensively used to assess the quality and impact of research. These indicators include factors like the impact factor of academic articles and key success factors in research. Through these indicators, the academic community can gain insights into which research holds greater influence in specific fields, subsequently guiding research directions and resource allocation.

In the field of education, evaluation indicators are used to assess the quality of educational institutions. Indicators such as student satisfaction, graduate employment rates, and the efficiency of educational resource utilization aid universities in evaluating the effectiveness and quality of their educational services. These indicators provide feedback to help schools improve their curricula, teaching methods, and student support services.

Additionally, evaluation indicators also play a crucial role in the assessment of research project proposals. Researchers need to provide a series of evaluation indicators to demonstrate the significance and feasibility of their research plans. These indicators may include expected research outcomes, the innovation of research methods, teamwork, etc. This helps researchers and readers assess the potential and contribution of the research project.

In summary, evaluation indicators play a pivotal guiding role in both academia and the field of education, aiding in the measurement and comparison of research outcomes, educational quality, and institutional performance. However, the selection of appropriate evaluation indicators and the correct interpretation of their significance remain complex challenges that require careful approaches and expert analysis. The accuracy and reliability of evaluation indicators are paramount in supporting the continuous improvement of education and research.

3. Methods

3.1 Research approach

This study employed a literature verification method and the Delphi method as its research methods. Firstly, existing evaluation indicators were compiled through a literature review. Subsequently, seven experts with qualifications and

practical experience in establishing new majors at higher vocational colleges were invited to participate in a Delphi method-based discussion on the evaluation indicators. The questionnaire content underwent three rounds of revisions based on expert opinions, ultimately resulting in a set of consensus-based evaluation indicators. These indicators carry a certain level of credibility derived from the experts' input.

3.2 Data Analysis

In each round of expert feedback, the researcher used inductive analysis to identify commonalities in expert opinions. These commonalities facilitated the establishment of a consistent evaluation framework. The researcher then revised the evaluation indicators and provided the revised content to each expert for specific feedback. Subsequently, through the aggregation of individual expert opinions and further content revisions, a consensus-based system of evaluation indicators was ultimately developed. These evaluation indicators were used to create the "Evaluation Indicator System for the Competitive Advantage of Newly Established Majors in Higher Vocational Colleges," as shown in Table 1. This chart serves as a visual representation of the evaluation system for the competitive advantage of newly established majors in higher vocational colleges.

4. Findings and Discussion

4.1 Research Findings

Using the aforementioned research methods, this study first, based on a review of the literature as previously discussed, established two fundamental definitions: the "indicator layer" and the "evaluation layer," and created an initial evaluation indicator chart. This process helps to clarify the scope and concerns of the study and provides a framework for subsequent research.

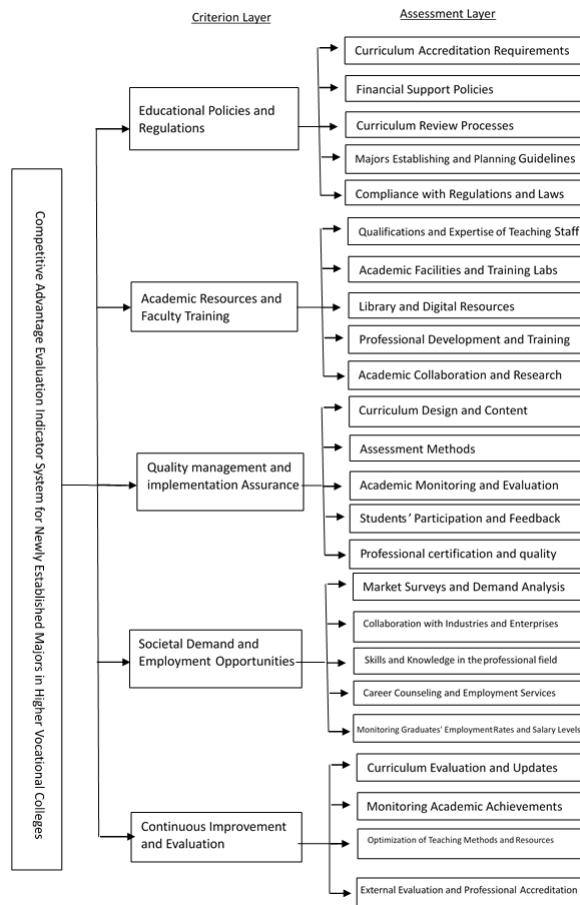


Figure 1. Competitive Advantage Evaluation Indicator System for Newly Established Majors in Higher Vocational Colleges.

Subsequently, the researcher sought experts who possessed the expertise in reviewing and establishing new majors in vocational colleges, conducting expert interviews. Through these interviews, the specific definitions of the "indicator layer" and the "evaluation layer" were further clarified. The insights and opinions of these experts contributed to ensuring the scientific rigor and feasibility of the evaluation system while enhancing the credibility of the study.

Then, the Delphi method was employed to collect and consolidate expert opinions, ultimately leading to the development of the "Competitive Advantage Evaluation Indicator System for Newly established majors in Vocational Colleges" for this study (Figure 1). This Evaluation Indicator System comprises five dimensions of the indicator: "Educational Policies and Regulations," "Academic Resources and Faculty Training," "Quality management and implementation Assurance," "Social Demand and Employment Opportunities," and "Continuous Improvement and Evaluation." and 24 dimensions of evaluation. It was formed through in-depth expert interviews and expert consensus, rendering it both scientific and practical.

Through the outcomes of this study, vocational colleges can comprehensively consider the establishment of new majors, ensuring they meet the standards of educational quality and market demand. These evaluation indicators will assist vocational colleges in targeting and enhancing their efforts to improve educational quality, meet societal needs, and bolster their competitiveness. Furthermore, this study provides vocational colleges with a systematic approach to ensure that the establishment of new majors maximizes value and benefits for students, educational institutions, and society as a whole. By taking into account factors such as policies, resources, quality, demand, and improvement, vocational colleges can better plan and manage the development of new majors, thus more effectively meeting the needs of education and society.

4.2 Discussion

In addition to referencing the central government policy guidance document, *Opinions on Promoting the High-Quality Development of Modern Vocational Education* as mentioned in the literature review, this study has also drawn upon relevant literature, including the self-evaluation indicators for the national "Double High-Level Plan" performance evaluation proposed by Cai Meng (2022) and Sun Yan's (2019) exploration of the classification evaluation of vocational colleges' major competitiveness. Subsequently, it has put forth a more comprehensive and widely applicable "Competitive Advantage Evaluation Indicator System for Newly Established Majors in Vocational Colleges." The distinguishing feature of this evaluation indicator system, in comparison to the previous cutting-edge research, lies in:

1) It is in line with the Policy Guidance of "Opinions on Promoting the High-Quality Development of Modern Vocational Education". At the beginning of the preliminary two basic definitions of "indicator layer" and "evaluation layer", this study refers to the spirit and principles of "ensuring learners acquire valuable knowledge and skills, fostering creativity and innovation ability, and fostering social competitiveness" outlined by the United Nations Educational, Scientific, and Cultural Organization and incorporated them into the initial expert interview questionnaire. Therefore, it is not only in line with the spirit of UNESCO but also in line with the meaning and practice of China's central government's policy guidance document *Opinions on Promoting the High-Quality Development of Modern Vocational Education*.

2) Distinguished from the "Self-evaluation Criteria of the National 'Double High-level Plan' Performance Evaluation," it offers broader applicability. The "National 'Double High-level Plan' Performance Evaluation" serves as a benchmark that many vocational colleges in China aspire to achieve. However, the majority of vocational colleges may not have the opportunity to be included in the "National 'Double High-Level Plan'." Nevertheless, the researcher firmly believes that each vocational college possesses its unique strengths and competitive advantages in its educational endeavors. These strengths may include the cultural and historical context of the college's location, regional competitiveness, and distinctive characteristics of the college. All of these factors represent potential conditions and advantages that vocational colleges may possess, and as such, this study has incorporated them into the comprehensive framework.

3) The competitiveness evaluation of establishing new majors in vocational colleges is structured around the comprehensive concept of competitive advantage. Continuing from the aforementioned overall conditions and framework of vocational colleges, this study introduces competitive advantage by emphasizing elements such as cultural and historical context, the college's regional competitiveness, and distinctive characteristics. Furthermore, it incorporated the unique strengths and advantages that vocational colleges inherently possess into the evaluation indicator system.

In summary, this study has introduced the "Competitive Advantage Evaluation Indicator System for Newly Established Majors in Vocational Colleges" with the aforementioned three distinctive characteristics. Through in-depth expert interviews and the employment of the Delphi method, consensus among experts was reached in constructing this system. Therefore, the evaluation indicator system proposed in this research is not only innovative but also highly applicable and innovative.

5. Conclusion

The conclusion of this study emphasizes the significance and uniqueness of the proposed Competitive Advantage Evaluation Indicator System for Newly Established Majors in Vocational Colleges. It also highlights its policy adaptability in the context of the internationalization of vocational education, its comprehensive applicability, and the emphasis it places on the competitive advantage of vocational colleges. Here is a summary of these key points:

Firstly, the evaluation indicator system in this study aligns with the Chinese government's policy guidance on Opinions on Promoting the High-Quality Development of Modern Vocational Education. At the initial stages of developing the evaluation indicator table, the researchers referenced the relevant principles and tenets outlined by the United Nations Educational, Scientific and Cultural Organization (UNESCO) regarding the cultivation of learners' creativity, innovation capabilities, and social competitiveness. These principles were incorporated into the expert interview questionnaire. This approach not only aligns with the spirit of UNESCO but also complies with the policy directives set forth by the central government of China, demonstrating the policy compliance of the evaluation indicator system.

Furthermore, the evaluation indicator system differs from the national Double High-Level Plan performance assessment and holds broader practical applicability. While the Double High-Level Plan is an objective pursued by vocational colleges in China, not all of them can be included in this program. Therefore, the researchers emphasize that vocational colleges still possess competitive advantages in education, such as the cultural and historical context of their locations, regional competitiveness, and distinctive educational features. These factors have been incorporated into the structure of the evaluation system, providing a targeted evaluation tool for a wider range of vocational colleges, enabling them to better leverage their unique strengths.

Finally, the evaluation indicator system situates the competitiveness evaluation of establishing new majors in vocational colleges within the comprehensive framework of advantageous competitiveness. In addition to considering factors such as policies, resources, quality, demand, and improvements, the researchers introduced the concept of advantageous competitiveness for vocational colleges, incorporating it into the evaluation indicator system. This holistic evaluation approach assists vocational colleges in better planning and managing the development of new majors to maximize their alignment with the needs of students, educational institutions, and society, ultimately enhancing the effectiveness of their educational endeavors.

The evaluation indicator system presented in this study is a pioneering, practical, and innovative tool that offers vocational colleges a comprehensive and targeted approach to evaluating the establishment of new majors. It not only assists vocational colleges in improving educational quality, meeting societal demands, and enhancing competitiveness but also provides crucial support for the educational development of vocational colleges in the context of internationalization. It is hoped that this research outcome will provide robust support and guidance for the sustainable development and international competitiveness of vocational colleges.

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