



Research on the Construction of the Evaluation System of Production-Education Integration in Sports Majors of Higher Vocational Colleges

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Abstract. At present, the integration of production and education in sports majors faces many challenges in practice, such as insufficient cooperation between schools and enterprises, uneven distribution of teaching resources, and imperfect evaluation system. Therefore, how to accurately evaluate the effect of the integration of production and education in sports majors in higher vocational colleges? How to build an evaluation system that is both in line with the characteristics of sports majors and operational? This is the focus of this paper. This paper will adopt a combination of quantitative and qualitative research methods, collect and analyze relevant data, objectively describe the current situation of the integration of production and education in sports majors in higher vocational colleges, and combine the CIPP model to construct an evaluation system including evaluation indicators, weights, evaluation methods and processes. The analytic hierarchy process (AHP) is used to determine the weights of the evaluation indicators to ensure the objectivity and accuracy of the evaluation results. By constructing a scientific and reasonable evaluation system, the effect of the integration of production and education in sports majors can be accurately evaluated, and existing problems and deficiencies can be found, providing strong support for improving and optimizing the integration of production and education model. At the same time, the implementation of the evaluation system can also promote close cooperation between higher vocational colleges and enterprises, and promote the innovation and development of the talent training model of sports majors.

Keywords: sports major; integration of industry and education; evaluation system

1 INTRODUCTION

In the context of big health, the sports industry needs applied sports talents. To meet the diverse sports needs of the people, it is necessary to comprehensively improve the

mechanism of sports service in colleges and universities, it is necessary to deepen the integration of industry and education, so that the supply side and the industry demand side of sports talent training can be consistent in structure, quality and level, and sports human resources can be developed in coordination with social needs^[1]. At present, the status quo of the integration of industry and education in sports majors in higher vocational colleges in my country presents the characteristics of diversification and complexity. With the growing demand for sports professionals in society, the integration of sports majors and the industry has become an important way to promote the improvement of talent training quality. However, it still faces many challenges. First, the development of the integration of industry and education in sports majors is unbalanced. Some higher vocational colleges have obvious shortcomings in resources, faculty, facilities, etc., which makes it difficult to carry out the integration of industry and education in depth. According to survey data, only less than 30% of the sports majors in higher vocational colleges can establish stable cooperative relations with enterprises or institutions, which to a certain extent limits the practical ability and employment competitiveness of students majoring in sports. Secondly, there is a lack of effective evaluation mechanism for the integration of industry and education in sports majors. At present, the evaluation of the integration of industry and education in sports majors mainly relies on the traditional education evaluation system, and lacks special evaluation indicators for the characteristics of the integration of industry and education. This makes it difficult for the evaluation results to fully reflect the actual effect of the integration of industry and education, and it is difficult to provide targeted improvement suggestions for higher vocational colleges. Therefore, it is particularly important to build a scientific and reasonable evaluation system. Furthermore, there are deficiencies in the integration of industry and education in sports majors in terms of talent training. Due to the particularity of sports majors, its talent training needs to focus on the combination of theory and practice. However, in actual operations, some higher vocational colleges pay too much attention to the imparting of theoretical knowledge and neglect the cultivation of practical ability. This makes it difficult for students to adapt to market demand after graduation, and also affects the in-depth development of the integration of industry and education in sports majors. Therefore, higher vocational colleges should strengthen cooperation with enterprises and institutions, jointly formulate talent training plans, and focus on the cultivation of practical ability^[2].

In summary, the integration of industry and education in sports majors faces problems and challenges such as imbalance, lack of effective evaluation mechanism, insufficient talent training and insufficient policy support in the process of development. In order to promote the in-depth development of the integration of industry and education in sports majors, the government, universities, enterprises and all parties in society need to work together to strengthen cooperation and exchanges and jointly build a scientific and reasonable evaluation system and talent training mechanism^[3]. This paper aims to construct an evaluation system for the integration of industry and education in sports majors in higher vocational colleges, so as to scientifically and systematically evaluate the effect and quality of the integration of industry and education, and provide theoretical support and practical guidance for the integration of industry and education in sports majors in higher vocational colleges^[4]. By constructing an evaluation system, we

can fully understand the current situation and existing problems of the integration of industry and education in sports majors in higher vocational colleges, and provide a basis for formulating targeted improvement measures; at the same time, the evaluation system can also provide an effective incentive mechanism for the integration of industry and education in sports majors in higher vocational colleges, and promote the in-depth development of the integration of industry and education.

2 THEORETICAL BASIS FOR THE CONSTRUCTION OF EVALUATION SYSTEM

When constructing the evaluation system of industry-education integration for sports majors in higher vocational colleges, we need to deeply understand and apply the relevant theories of industry-education integration evaluation. The industry-education integration evaluation theory emphasizes the scientificity and systematicness of the evaluation system, and requires that the evaluation indicators can fully reflect the actual situation of industry-education integration and be operational and quantifiable^[5]. To this end, we can draw on advanced evaluation models at home and abroad, such as the CIPP evaluation model, which includes four links: background evaluation, input evaluation, process evaluation, and outcome evaluation, and can comprehensively evaluate the entire process of industry-education integration.

In the selection of evaluation indicators, we should not only consider the characteristics of sports majors, but also combine them with the actual needs of industry-education integration. For example, the number of school-enterprise cooperation projects, student internship training time, and enterprise satisfaction can be selected as evaluation indicators. At the same time, in order to fully reflect the multi-dimensional characteristics of industry-education integration, the evaluation indicators should also include teaching quality, scientific research innovation, social services and other aspects^[6]. To quantitatively evaluate the effect of industry-education integration. At the same time, we can also introduce third-party evaluation agencies to collect data through questionnaires, interviews, etc. to ensure the objectivity and fairness of the evaluation results.

In terms of classification, evaluation indicators can be divided according to different dimensions. From the perspective of the participants in the integration of industry and education, the evaluation indicators can be divided into school level, enterprise level and student level. The indicators at the school level mainly focus on aspects such as educational resource investment, teaching management, scientific research innovation, etc.; the indicators at the enterprise level focus on the implementation effect of school-enterprise cooperation projects, the evaluation of students' practical ability by enterprises, etc.; the indicators at the student level focus on students' learning experience, ability improvement and employment in the process of integration of industry and education. By classifying indicators at different levels, the actual situation of the integration of industry and education can be more comprehensively reflected.

In the evaluation process, we also need to pay attention to data collection and processing. By collecting a large amount of data and using statistical analysis methods

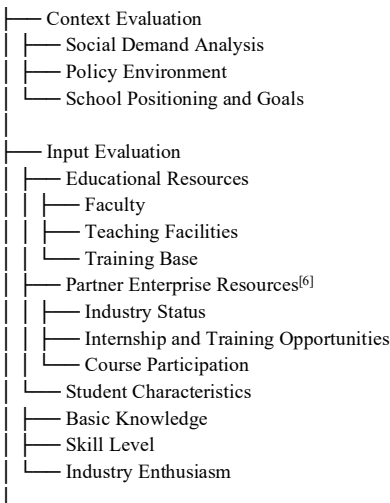
such as factor analysis and cluster analysis, we can determine the weights and conduct comprehensive evaluations of evaluation indicators. In addition, we can also use big data and artificial intelligence technology to conduct in-depth mining and analysis of evaluation data to discover potential problems and improvement directions for industry-education integration.

In terms of feedback and application of evaluation results, the evaluation results will be fed back to relevant departments and personnel in a timely manner so that they can understand the actual situation of industry-education integration and take corresponding improvement measures. At the same time, the evaluation results can also be used as an important basis for the integration of industry and education in sports majors in higher vocational colleges, providing guidance and support for future work.

When determining the weights of evaluation indicators, a combination of the Delphi Method and the Analytic Hierarchy Process (AHP) was used. First, the Delphi Method was used to invite industry experts, scholars, and practitioners to conduct multiple rounds of anonymous consultations to collect their views and suggestions on the importance of each evaluation indicator. Then, the AHP was used to construct the hierarchical structure of the evaluation indicator system, and the weights of indicators at each level were determined through expert scoring and calculation.

3 DESIGN OF THE EVALUATION SYSTEM FOR THE INTEGRATION OF PRODUCTION AND EDUCATION IN SPORTS MAJORS OF HIGHER VOCATIONAL COLLEGES BASED ON THE CIPP MODEL

3.1 CIPP Evaluation Model for the Integration of Industry and Education in Sports Majors



- Process Evaluation^[7]
 - Course Design and Implementation
 - Course Content Docking
 - Modernization of teaching methods
 - Ratio of practical teaching
 - School-enterprise cooperation model
 - Joint development of courses
 - Internship and training arrangements
 - Training of dual-qualified teachers
 - Student participation
 - Project participation
 - Competition participation
 - Social practice
- Product Evaluation
 - Student achievements^[8]
 - Skill mastery
 - Vocational qualification certificate acquisition rate
 - Employment quality
 - Teacher development
 - Professional title promotion
 - Teaching achievements
 - Social impact
 - Technological innovation
 - Social service

3.2 Constructing an Evaluation Index System ^{[2][5][6][7]}

Evaluation Phase	First level indicator	Secondary indicators	Evaluation content and methods	Weights
Back-ground evaluation	Clarity of teaching objectives	The conformity between the goal and social needs	Evaluate the relevance and clarity of teaching objectives in light of the needs of society for sports talent	5
	Professional positioning accuracy	The conformity between the professional setting and the social sports service direction	Assess whether the professional settings meet the current and future directions of social sports services.	5
	Policy and regulatory compliance	Consistency between curriculum and policies and regulations	Check whether the course content complies with relevant education policies and sports regulations.	2.5
	Social needs analysis	Survey on the Demand for Social Sports Talents	Through research and analysis, we can find the specific needs of the society for professional sports talents.	2.5
Enter your review	Faculty	Teachers' professional background and practical experience	Teache'qualifications, professional background and practical experience in the field of sports are assessed.	7.5
	Course Resources	Teaching materials and facilities	Evaluate the update degree of teaching materials, the completeness and modernization level of teaching facilities and sports equipment.	5
	Funding	Funding support for industry-education integration	Assess whether the funds used for industry-education integration projects are sufficient and the rationality of the use of funds.	5

	Partner	The quality and depth of school-enterprise cooperation	Evaluate the cooperation model with enterprises or industries, the depth of cooperation and the support for teaching.	5
Process Evaluation	Teaching method	Effectiveness of teaching methods	Evaluate whether the teaching methods adopted can improve students' practical ability and innovative thinking.	7.5
	Practical teaching	Design and implementation of practical training	Evaluate whether the design of practical teaching is reasonable and whether the implementation is in place.	7.5
	Student Engagement	Student participation in teaching activities	The students' participation in teaching activities was evaluated through questionnaire surveys and classroom observations.	5
	Quality control	Teaching process monitoring mechanism	Evaluate the establishment and implementation of monitoring mechanisms in the teaching process, as well as the timeliness and effectiveness of the feedback system.	2.5
Results Evaluation	Student capacity building	Improvement of students' professional abilities and skills	Evaluate students' growth in professional knowledge and skills through assessments, portfolios, and skill tests.	10
	Employment status	Graduate employment rate and quality	Collect and analyze graduates' employment data and evaluate employment rates and quality.	10
	Social Feedback	Society's evaluation of graduates	Through questionnaires, interviews and other means, collect comprehensive evaluations of graduates from society and the industry.	10
	keep improve	Curriculum and teaching method improvement	Evaluate the improvements in curriculum and teaching methods made by schools and companies based on the evaluation results.	5
Additional indicators	Innovation and Research	Students participate in research projects	Evaluate the quantity and quality of students' participation in scientific research projects, as well as the application of scientific research results.	2.5
	Diversified student development	Personalized development support	Evaluate the school's support measures and effectiveness for students' personalized development and diversified needs.	2.5

4 CONCLUSION AND OUTLOOK

4.1 Research Conclusions

After in-depth research and empirical analysis, this study constructed an evaluation system for the integration of production and education in sports majors in higher vocational colleges, and drew a series of guiding conclusions. First, the construction of the evaluation system must be closely combined with the characteristics and laws of sports majors to ensure the pertinence and practicality of the evaluation indicators. For example, in the evaluation indicator system, we particularly emphasized the importance of practical teaching links and set corresponding weights to reflect the actual needs of the

integration of production and education in sports majors. Secondly, the scientificity and rationality of the evaluation method are crucial to the accuracy of the evaluation results. We adopted an evaluation method that combines quantitative and qualitative methods, collected data through questionnaires, expert interviews and other methods, and used statistical analysis software for data processing to ensure the objectivity and fairness of the evaluation results. Finally, the implementation of the evaluation system requires an effective management and monitoring mechanism^{[9][10]}. We proposed strategies such as preparatory work before implementation, management and monitoring during implementation, etc. to ensure the smooth operation and effective implementation of the evaluation system.

4.2 Research Contribution

This study has made significant contributions to the construction of an evaluation system for the integration of industry and education in physical education majors in higher vocational colleges. First of all, through an in-depth analysis of the development process and current situation of the integration of industry and education in sports majors, this study successfully constructed a comprehensive and systematic evaluation system, providing a scientific evaluation tool for the integration of industry and education in sports majors in higher vocational colleges. Secondly, in the selection and classification of evaluation indicators, this study fully considered the characteristics and laws of the sports major to ensure the pertinence and practicality of the evaluation system. In addition, this study also adopted a variety of data collection and processing methods, as well as scientific evaluation standards and scoring methods, making the evaluation results more objective and accurate^[11].

In short, the research on the evaluation system for the integration of industry and education in physical education majors in higher vocational colleges is a long-term and complex process. Future research will pay more attention to the development of data collection and analysis, the applicability and promotion of the evaluation system, and theoretical innovation, in order to promote the continuous deepening and high-quality development of the integration of industry and education in the physical education major in higher vocational colleges.

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