

Study on the Construction of Performance Evaluation Index System of School-enterprise Cooperation Project in Higher Vocational Colleges

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Abstract. As an important way of training talents, school-enterprise cooperation is highly praised by the educational and economic circles of all countries. Vocational education spans enterprises and schools and is a cross-border and innovative education. Constructing the performance index system of school-enterprise cooperation project is the basic work of establishing the cooperation operation and incentive mechanism between school and enterprise in Higher Vocational colleges. Through the performance evaluation of school-enterprise cooperation, we can diagnose the existing problems, tap the potential of cooperation, expand the space of cooperation and improve the effect of cooperation. According to the results of the results, a rational analysis was carried out. The teaching management teachers reformed the teaching, adjusted the original teaching plan, and set the specific curriculum and teaching content reform. Suggest improvements for optimizing project operations. Fully considering the optimal scheme for the decision-making unit itself, it can more ideally reflect the information and characteristics of the evaluation object itself, and at the same time, the evaluation is complicated. In order to control the number of indicators, it is necessary to screen out the key indicators to provide a theoretical basis for the sustainable development of school-enterprise cooperation projects and the reform and development of vocational college education and teaching.

Keywords: Higher Vocational Colleges, School-Enterprise Cooperation, Project Performance; Evaluation.

1. Introduction

School-enterprise cooperation is the eternal theme of Vocational education. The quality of vocational education depends on the level of school-enterprise cooperation. It is also necessary to evaluate the performance of school-enterprise cooperation [1]. Higher vocational education must be guided by the demand for enterprise talents, and must implement the "school-enterprise cooperation, work-study combination" talent training mode, which has become the consensus of the vocational education circles in China. Performance evaluation has become an important tool for the government to formulate educational policies, allocate educational funds and strengthen university management. [2]. We should not only clarify the responsibilities and obligations of both sides in school-enterprise cooperation, but also clarify the interests and rights of both sides so as to escort school-enterprise cooperation, and at the same time, make both sides of school-enterprise cooperation docking have evidence and rules to follow. It plays an important role in training skilled personnel. It is not only an inevitable requirement for enterprise development and competition, but also an important direction of vocational education reform in China. For a single project, there is still a lack of a scientific, systematic and comprehensive evaluation index system for scientific evaluation and analysis. The current indicators system has problems mainly: The evaluation purpose has a simplification tendency. The common feature is that the school-enterprise cooperative education is the apprenticeship of the enterprise or production department. The enterprise or production department is the main organizer and manager of the school-enterprise cooperative education. The proportion of training in the enterprise is far greater than the proportion of the school teaching [3].

From the point of view of the evaluation of school education and teaching, it reflects the quality of teaching and graduate training of the project, which cannot truly reflect the financial benefits of the project, and affects the Leaders' judgment of the current situation of the project and the decision-making of its development [4]. The fairness in evaluation cannot be measured; the setting of evaluation indicators is controversial; the application effect of evaluation is not significant; and the

evaluation system is not perfect. In order to make the project develop well and quickly, it is urgent to establish a comprehensive evaluation index system for school-enterprise cooperation projects [5]. We should really grasp the future demand and types of post talents in line with the training level of Vocational colleges, and the comprehensive requirements of technical and skilled talents in knowledge, skills and professional literacy by technical management departments. In order to make the talents trained by vocational schools meet the needs of the market and enterprises, it is one of the effective ways to carry out in-depth school-enterprise cooperation [6]. Enhance the position of enterprises in school-enterprise cooperation, enhance their motivation to participate in school-enterprise cooperation, change the dominant position of higher vocational colleges in talent training, and form a benign mechanism of “dual-core drive”. It is extremely necessary to conduct in-depth research on the quantitative performance of school-enterprise cooperation, which helps us to understand the sincerity and self-reflection of cooperation between the two parties and provide an information base for in-depth, sustained and effective cooperation. Inspire the intrinsic motivation to adapt the school to the requirements of the era of higher vocational education, and gradually realize the deep integration with the industry and enterprises [7].

2. Materials and Methods

Higher vocational colleges and enterprises are the main stakeholders of school-enterprise cooperation. Whether higher vocational colleges can cooperate with enterprises depends on finding and grasping the balance of interests of both sides, and whether the cooperation can produce the greatest economic benefits. Insufficient strategic positioning, institutional settings, system construction, capital investment and staffing of school-enterprise cooperation in higher vocational colleges may make it impossible for higher vocational colleges to stimulate the motive force of promoting school-enterprise cooperation from within. There are many cooperative projects involved in school-enterprise cooperation. If these projects are directly used as a single indicator, they will not only be complicated, but also lead to scattered objectives and inadequate essentials. In order to visit the human resources department and production technology department of potential cooperative enterprises, we should really grasp the future demand and types of post talents in line with the training level of Vocational colleges. There are many performance indicators. Finding key performance indicators is an important measure. A targeted quantitative assessment indicator for measuring process performance by sizing, sampling, calculating, and analyzing key parameters at the input and output of a process within an organization. Fully considering the optimal input-output scheme for the decision-making unit itself, it can more ideally reflect the information and characteristics of the evaluation object itself, and at the same time, the evaluation is complicated. After judging the matrix form and forming the judgment matrix, the relative importance weight of a certain layer for an element of the previous level can be calculated by calculating the feature vector corresponding to the largest eigenvalue of the judgment matrix. The weights of performance evaluation indicators for school-enterprise cooperation projects are shown in Table 1.

Table 1. Weights of Performance Evaluation Indicators for School-Enterprise Cooperation Projects

	Factor	Weight coefficient
Construction of Teaching Resources Setting up monitoring indicators	On-the-job Training of Teachers in Enterprise Receiving Schools	0.05
	Number of Practice Instructors Arranged by Enterprises	0.32
	Enterprises' Investment in the Construction of School Training Base	0.35
Monitoring Indicators of Teaching Process	Number of School Professional Personnel Training Programs Participated by Enterprises in Formulating or Revising	0.27
	The Coverage Rate of Schools and Enterprises to Follow-up Instructions for Internship Students	0.29
	Coverage of schools and enterprises to follow-up guidance for graduates	0.34
Monitoring Indicators of Enterprise Quality	The Growth Rate of Total Employees in Enterprises	0.19
	Average Remuneration of Enterprises	0.25
	Enterprises Design Career Channels for Higher Vocational Graduates	0.26

The types of resources invested by enterprises describe the resources invested by enterprises in the process of cooperation with vocational colleges as a whole. Considering the social benefits of the brand, introducing the advanced training system of enterprises and promoting the reform of vocational education and teaching, the school is very active in school-enterprise cooperation projects, and the investment of funds is gradually increasing with the breadth and depth of training content. The level of teachers in professional knowledge and skills, teaching ability and methods is very high. Higher vocational colleges should cooperate with enterprises to carry out school-enterprise cooperation with the advantage of bringing benefits to enterprises, and appropriately bear the costs of engineering and learning integration in the school-enterprise cooperation, construction of practical training bases, etc., and actively play teaching, research and human resources. The advantages of other aspects provide services for the development of the enterprise. In terms of teaching documents, the semester lecture plan, lesson plans, and teaching courseware reflect the concept of modern vocational education and reflect advanced teaching methods and learning methods. In the higher vocational colleges, the performance research is quantified, and the performance evaluation input indicators and output indicators are in principle reflected in the particularity and operational mechanism of higher vocational colleges. The factor reflects the school's unilateral investment in school-enterprise cooperation, and indirectly reflects the school's sincerity in school-enterprise cooperation, indicating the school's consideration of the long-term development of school-enterprise cooperation.

Higher vocational colleges should establish a benign school-enterprise cooperation operation and incentive mechanism, and the construction of school-enterprise cooperation project performance index system is a basic work. Cooperative projects require students to meet the requirements of enterprises. Students required by enterprises not only have solid theoretical knowledge, skilled operation, but also have higher requirements in Ideological quality. Enterprises should substantially participate in the process of personnel training, give full play to the role of personnel needs, personnel training objectives, professional curricula, knowledge and skills structure, the determination and implementation of teaching content, and the evaluation of learning effect, so as to truly get talents to meet their own needs. In general, enterprises pay more attention to the practical ability and quality of employees, and the more extreme hope is to bring the training courses of enterprises directly into the classroom of colleges and universities. at this point, the two sides need to sit down and negotiate the best theoretical and practical time-to-volume ratio. Through the factor analysis method, the indicators for the evaluation of school-enterprise cooperation can be greatly simplified, but the contribution coefficient of each item for each factor. Through the dimensionality reduction of multiple indicators, on the one hand, we identify key indicators that affect input and output, and on the other hand, under

the premise of maintaining the information volume of the original indicator system, new variables are generated as new indicators of input and output. Without any weighting assumptions, the actual weights of the input and output of the decision-making unit are used to obtain the optimal weight, which excludes many subjective factors and has strong objectivity. The total variance of the factor analysis interpretation is shown in Figure 1.

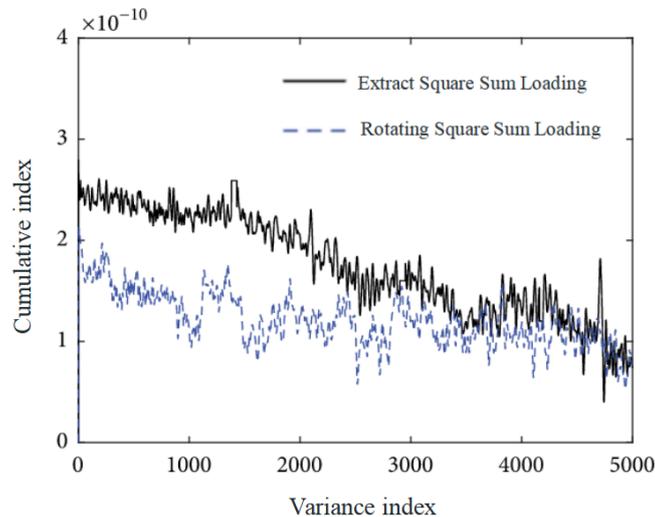


Fig. 1 Total Variance of Factor Analysis Interpretation

3. Result Analysis and Discussion

To clarify the power and responsibility of local government in coordinating the relationship between school and enterprise, and to mobilize the enthusiasm of enterprises and schools through policy guidance aiming at evaluating the information resources obtained. The goal of cooperation between universities and enterprises is diversified. It may be not only personnel training and transportation, but also technological innovation, product research and development, management consulting and so on. From the point of view of Higher Vocational Colleges and enterprises, it is necessary to discuss students 'career planning, curriculum system, work-study integration, teachers' team, learning and practice environment in the process of cooperation. Enterprise initiative, school initiative, school influence, industry attributes and scale of partner units, teachers' technology research and development and service capabilities, and others are all influencing factors. Under the premise of satisfying the laws of education itself, we must finally do some "concessions and compromises". Therefore, a seemingly beautiful cooperation vision may require the school and enterprise to undergo marathon negotiations to gradually achieve realistic operations.

The pass rate of technical grade examination for students is one of the important indicators to test the quality of school-enterprise cooperation projects. It should be said that the depth and breadth of the projects are constantly strengthened. The cooperation projects between the two sides give schools the opportunity to build a teaching and training system and truly realize the training of talents. It is impossible for enterprises and vocational colleges to foresee all the details of the possible problems such as software and hardware resources in cooperation in advance. Only by solving these specific problems carefully can the rights and obligations of both sides be gradually improved so as to minimize the occurrence of uncertainties. Maintaining the input or input of decision-making units is relatively effective by means of mathematical planning and statistical data. We should not only highlight the particularity and operation mechanism of Higher Vocational Colleges in China, but also take into account the accessibility of index data. It is necessary to follow the principle of no value, maintain a position of neutrality, and treat the school and enterprise that participate in cooperation equally. For enterprises, driven by interests, they will basically welcome behaviors and cooperation that contribute to their legal profitability. Naturally, they will also build professional construction, curriculum development, training operations and training bases for higher vocational colleges. The

aspect provides useful help. For those inferior enterprises that are biased towards short-term employment needs and lack of school-enterprise cooperation awareness and ability, they should be gradually marginalized until the partnership is terminated.

Relevant schools and enterprise stakeholders participate in the scientific decision-making mechanism, adapting to local conditions, and jointly explore the best mode of school-enterprise cooperation in line with regional characteristics and industry characteristics, and the implementation of these laws, regulations and mechanisms. By using the project performance evaluation system, schools can reflect the planning requirements of school-enterprise cooperation in various indicators, and implement fine management of school-enterprise cooperation projects. Colleges and universities will adjust their work plans appropriately according to the objectives of talents determined by enterprises, while enterprises will put forward requirements for talent specifications, training objectives, knowledge and skills structure, curriculum settings and contents, and student assessment, and cooperate with colleges and universities to carry out training work. We should build a management platform and share teaching resources to create a virtuous circle environment for school-enterprise cooperation in educating people and co-development of industry, education and research, and finally form a win-win situation for Higher Vocational colleges, enterprises and students. The quality of students is the primary factor affecting the participation of enterprises in school-enterprise cooperation, which is consistent with the demand for talents. At the same time, government policies and management systems play a very important role in the participation of enterprises in school-enterprise cooperation. The colleges and universities will appropriately adjust the work plan based on the talents determined by the company. The enterprises will put forward requirements for talent specifications, training objectives, knowledge and skill structure, curriculum and content, and student assessment, and cooperate with the institutions to carry out training work.

4. Summary

This paper studies the construction of performance evaluation index system of school-enterprise cooperation projects in Higher Vocational colleges. The promotion of education and teaching reform is very important for Vocational colleges. The integration of theory and practice can reflect the action orientation. Through cooperation, teachers have been trained, their abilities have been improved, the level of education and research has been improved, the construction of schools and specialties has been promoted, and it has played an important role in the promotion of education and teaching reform. Only by forming a "community of interests" can we reduce the investment of the whole project and ensure the healthy and sustainable development of the school-enterprise cooperation training project. Establishing a feasible evaluation system of school-enterprise cooperation can help enterprises understand the shortcomings in the process of participating in school-enterprise cooperation in Vocational colleges. Constructing a long-term mechanism for the cooperation between schools and enterprises in higher vocational colleges can promote the deep integration between schools and enterprises, and is conducive to the sharing of school and enterprise resources. The key is to find out the status quo and characteristics of school-enterprise cooperation in various regions, and the quantitative evaluation of school-enterprise cooperation performance provides the basis and possibility for analyzing these factors. The cooperative development plan selects the most practical indicators from the index database, and assigns different weights according to the importance degree of the indicators, so that the final performance evaluation conforms to the value orientation of school management.

Acknowledgments

Fund Project: Yunnan Provincial Department of Education Scientific Research Fund Project 2017ZDX197.

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