ISSN: 2688-9323

New Thinking on the Construction of Practice Teaching Bases Outside of Economic Statistics under the Background of "Internet +"

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Abstract

First, this paper analyzes the development characteristics of the school-proof practical teaching base. Secondly, comparative analysis of the development experience of the school-proof teaching base, and summarizes the trend of economic statistical majors to build the "Internet +" integration method as the background And main models. Finally, the reform measures of economic statistics on how to build "Internet +" is integrated into ideas.

Keywords

"Internet +"; Economic Statistics; Off-campus Practice Teaching Bases; New Thinking.

1. Introduction

In February 2019, the Central Committee of the Communist Party of China and the State Council issued the "China Education Modernization 2035", emphasizing the need to strengthen the cultivation of innovative talents, especially top-notch innovative talents, and increase the proportion of applied, composite, and technical skills. In order to deeply implement the spirit of the National Education Conference and "China Education Modernization 2035", fully implement the undergraduate education in universities in the new era, and deepen the reform of undergraduate teaching, the Out-of-school practice curriculum vigorously promotes cooperation with enterprises and industry departments by strengthening practice and educating people, and deepening the integration of industry and education. Jointly build a practical teaching base, effectively strengthen the management of the internship process, and improve the cooperation and win-win, open and shared practice education mechanism. [1]

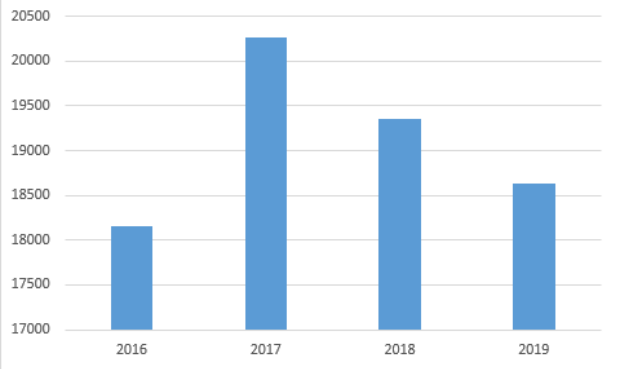

Figure 1. Number of students enrolled in statistics in 2016-2019

Note: The data comes from the 2016-2019 national general undergraduate batch enrollment plan

ISSN: 2688-9323

The Off-campus practice teaching bases has played an important role in the professional construction. The well-established practice teaching bases has achieved certain results in the past, but under the new technology and era background, how to build an Off-campus practice teaching bases and how to make It is also extremely necessary and meaningful for the well-established Off-campus practice teaching bases to exert its function and continue to continue to deepen research. Especially in the context of big data, how to use the "Internet +" idea and the practice teaching bases outside the school to achieve the deepening of the professional teaching model and the Internet and the development of integration and explore the new model of practice teaching bases construction outside the school are urgently needed research.[2]

2. The Mainstream Mode of Practical Teaching Base Construction

With the advent of the era of big data, facing the digital economy and serving the modern service industry chains such as social economic research, financial investment management, etc., traditional economic statistics classroom teaching has gradually failed to meet the society's demand for statistical professionals. [3]What needs to be cultivated is often to have good academic qualities in economics, statistics, mathematics, informatics, etc., master the basic principles of modern economic statistics and big data analysis methods, and develop the moral body in an all-round way, able to handle social economy more proficiently with the help of statistical software Compound talents for data. [4] Especially for undergraduates, there are certain higher requirements for their practical ability.

2.1. Construction Model of Off-campus Practice Teaching Bases in German Universities

Germany's application-oriented talent training operates according to the "dual system" model: students receive basic education on cultural and professional theories in school classrooms and vocational skills training in enterprises. The enterprise is not only a place for students to practice, but also a training subject that plays a leading and core role in the entire vocational education.[5] Germany has formulated a complete legal decree at the national level, which specifies specific obligations for enterprises in personnel training. The government has set up a special agency to manage the specific affairs of school-enterprise cooperation and ensure the implementation of rules and regulations.[6] Enterprises participating in practical teaching can obtain state subsidies and tax benefits, which is profitable. Under the influence of the multi-party mechanism, companies can actively provide students with practical places, so that the German University of Applied Sciences can obtain a stable Off-campus practice teaching basis. [7]

2.2. Construction Mode of Off-campus Practice Teaching Bases in Australian Universities

Australia's TAFE Academy has adopted a practice that is very different from that of Germany: students receive basic education in culture and professional theory in school classrooms, and vocational skills training in enterprises. The practice teaching bases is mainly built in the school, but its investment subject is not the school, but the government and enterprises. [8] Due to the funding guarantee, the bases facilities are advanced and the quantity is sufficient, which is close to the actual production level of the enterprise. Moreover, the training teachers are all recruited from professional and technical personnel with practical experience and rich practical experience. In addition to at least three years of practical experience, full-time teachers also need to go to the enterprise regularly for professional practice. Although the practice teaching bases is built in the school, it is highly similar to the corporate environment, allowing students to obtain real professional experience and skill training. [9]

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2.3. Construction Model of Off-campus Practice Teaching Bases in American Universities

American colleges and universities mainly conduct practical teaching through the industry-academic cooperative education model. The United States has had provisions on vocational education and training since the "Defense Education Law" of 1958; the famous "Perkins Law" was enacted in the 1990s, which provided legal basis for both parties to industry-university cooperation and strengthened The government and all sectors of society have supported the industry-academia cooperative education, and established the National Cooperative Education Committee to coordinate the cooperative education work of colleges and universities across the United States. Supported by laws and supported by fiscal and taxation policies, American companies actively cooperate with universities to provide students with practical opportunities. [10]For example: Citibank has launched talent training programs with more than 40 famous universities in the United States, providing $18.5 million to these universities for teaching practice activities and providing students with internships; Stanford University has attracted a large number of enterprises by creating the Stanford Research Institute. [11] The enterprise has become an important practical teaching bases for Stanford University.

2.4. "Industrial Park" Collaborative and Innovative Off-campus Practice Teaching Bases Organization Mode

The industry-education integration alliance is a community of interests built on a voluntary basis in accordance with the principle of mutual benefit and win-win, based on the industrial park as the link, the construction of collaborative innovation practice teaching bases. [12]Any university that is willing to abide by the relevant system of the bases and undertake corresponding obligations can apply to become a member of the alliance; enterprises that have settled in the industrial park automatically become members of the industry-education integration alliance. Enterprises entering the industrial park should meet two conditions: First, they can provide a certain number of internship positions and instructors, and second, they are willing to pay vocational education funds.

3. Difficulties in the Construction and Reform of Practical Teaching Base

3.1. Achieve Long-term In-depth Cooperation with Outstanding Companies in the Industry, So That Out-of-school Practical Teaching is also Formalized and Institutionalized Within the Enterprise

There are four main modes of school-enterprise cooperation. Economics and management majors are currently focused on the production-education integration and co-construction model, talent training and exchange models. Commonly, there are school-enterprise co-construction of undergraduate entrepreneurship practice bases, and colleges and universities hire business people as mentors,etc. Students go deep into the production links of enterprises, and enterprises set up teaching funds in colleges and universities. However, there is little involvement in the project traction model such as providing technology transfer and the industry-education integration research and development model. It does not deepen the cooperation content, nor does it effectively connect with the industry-education integration. At present, the main construction of Off-campus practice teaching bases is still in colleges and majors. However, although enterprises participate, most companies recognize the functional recognition of Off-campus practice teaching into their internal utility and the motivation to institutionalize it is insufficient. How to promote the role of Off-campus practice teaching bases not only requires the participation of enterprises, but also needs the active demand of enterprises. How to promote enterprises to actively establish an Out-of-school practice

ISSN: 2688-9323

teaching bases to make it institutionalized is one of the difficulties in the current bases construction reform. [13]

3.2. The Determination of the Optimal Mode of the Teaching Process of the Practice Teaching Bases Outside of Economic Statistics under the Background of "Internet +"

At present, there are many modes of the teaching process in the construction of Off-campus practice teaching bases, but most of them are in the exploration stage, and because of the different nature of the profession and the different local affiliated companies, many modes cannot be shared, so they are not suitable for economic statistics. The optimal model of the teaching process of the practice teaching bases is still inconclusive. We have explored a new model of the teaching process of the Off-campus practice teaching bases, how to change the teaching mode of the existing Off-campus practice teaching bases, etc. This is still another major difficulty in the current research outside the practice bases of economic statistics.

4. The Main Measures for the Construction of Practice Teaching Base

Guided by Xi Jinping's new era socialism with Chinese characteristics, based on the background of big data, and facing the needs of social enterprise industry talents, we are committed to cultivating economic statistics application and compound talents that meet market needs.

4.1. Enterprises Jointly Build Online Training Classes to Deepen Online and Offline Mixed Teaching

By encouraging students to obtain the corresponding training certificate, such as CDA data analysis certificate, SAS programmer grade certificate, etc. to achieve document integration. At present, a laboratory cooperation agreement has been signed with SAS of the United States. SAS has currently launched a series of online training and offline training courses. Students can participate in the latest developments in professional data analysis and professional practical explanations to enhance students and enterprises. Close connection with industry. By continuing to explore co-construction of data analysis training courses with American SAS, etc., to provide students with more diverse and flexible professional self-learning platforms, companies can also make Long-term profits.

4.2. Adopt the "Project + Joint" Training Method, Practice the Cooperation between Schools, Government and Enterprises to Educate People

Adopt the model of "classroom teaching + practical teaching + professional practical training" to build a practical teaching system of professional comprehensive practice, vocational skill training, and entrepreneurial innovation practice. To achieve business integration through the introduction of external SAS companies to cooperate in employee training, skill level appraisal, and talent evaluation, and adopt the "project + joint" training method to allow talent training to meet the needs of the job; arrange the teaching venue for professional practice courses to SAS For other professional workplaces, the “dual-place” interactive organization method of alternating engineering and learning is implemented, so that the standards, evaluation and process of professional talent training can be connected with the enterprise.

4.3. Connotation Construction of Off-campus Practice Bases

In the context of big data, the case analysis data of economic statistics is often stored in the company's internal servers and other conditions, and daily book cases are difficult to meet the learning needs of students. Therefore, strengthen the contact with cooperative enterprises, build a "classroom + enterprise + top post" practical teaching system and an "enterprise-education integration, resource sharing" enterprise internship mechanism (as shown in Figure

ISSN: 2688-9323

2), and transfer the practice simulation classroom directly to the counterpart cooperative enterprise Development is an effective way to improve the combination of students' theory and practice, and it is also the main part of constructing the connotation system of Off-campus practice bases.

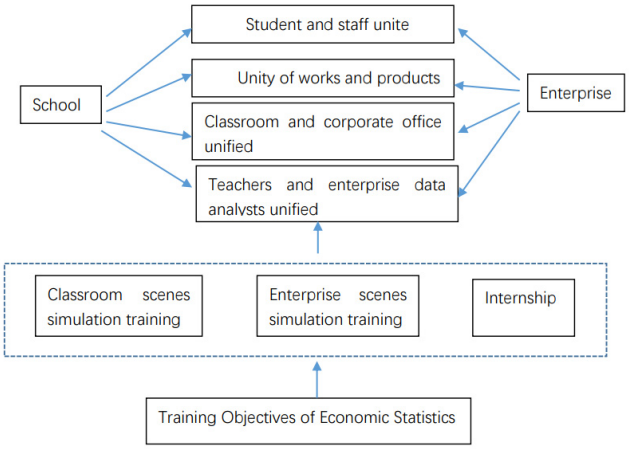

Figure 2. "Classroom + enterprise + top post" practical teaching system and enterprise internship mechanism of "integration of industry and education, resource sharing"

4.4. Optimize the Evaluation Index System for Student Assessment

The evaluation index system of practical teaching assessment is to reasonably and systematically measure the effect of students' internship, which directly affects the enthusiasm and ability of students. The evaluation index should be comprehensive, scientific and operable. Assessment evaluation indicators can be divided into qualitative and quantitative indicators, comprehensively assessing and measuring students' internship effects and performance. The main evaluation indicators are shown in Figure 3.

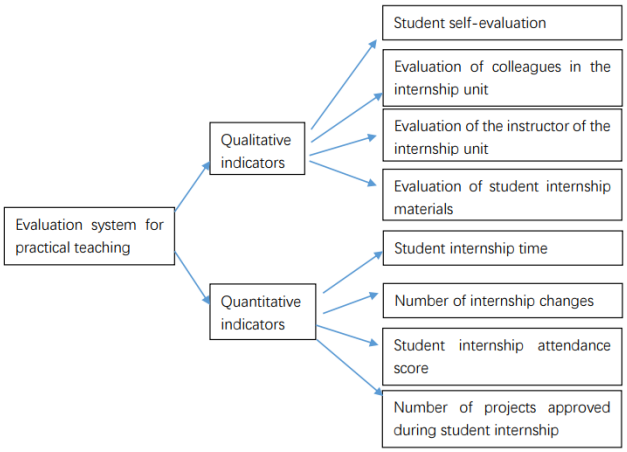

Figure 3. Students' practical teaching assessment system

5. Conclusion

This article uses the "Internet +" thinking, combined with national policy and literature research, to analyze the determination of the new model of Off-campus practice teaching bases with case analysis method, and then realize the exploration of new ideas for the construction of Off-campus practice teaching bases. It summarizes the construction modes of Off-campus practice bases and collaborative innovation bases construction modes in Germany, the United States, Australia and other countries, analyzes the main difficulties of the reform of the

construction of Off-campus practice bases for economic statistics, and proposes online training courses for enterprises The deepening of the reform measures for Off-campus practice construction bases of economic statistics, such as online and offline mixed teaching and connotation construction of Off-campus practice bases, has provided certain new ideas for the construction of Off-campus practice bases for economic statistics.

Acknowledgments

This research was financially supported by the education reform and research project fund of Fuzhou University of International Studies and Trade (Grant No. JF2020025).

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