

# *Practical Deficiencies and Routing Optimization of Professional Teaching Plan in Higher Vocational Colleges*

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**Abstract:** Higher vocational talent training is a systematic project. The professional teaching plan is the basic blueprint for talent cultivation, which has been formulated and implemented by each college and university independently in the absence of national standards. Currently the limitations in reality and deficiencies in management have critically influenced the overall effectiveness of talent training. Problem-oriented, this article tries to solve problems from the aspects of improving overall vision, integrating resources, optimizing process and implementing monitoring, aiming to elevate the feasibility and overall implementation effect of professional teaching plan in higher vocational colleges.

## **1. Introduction**

Higher vocational education is a type of China's higher education, and it is also an educational concept with Chinese characteristics. Analyzing from levels, exercises, objectives and programs, it is consistent with the International Standard Classification of Education (ISCED 2011) 5B: "to enable learners to acquire knowledge, skills and competencies specific to a certain occupation, industry or several occupations, industries" [1], focusing on the talent cultivation with practical skills. When comparing different types of education in China, it is found that the cultivation of higher vocational talents outperforms ordinary universities in terms of its cultivation of application ability, and outperforms secondary vocational schools in terms of technicality. When analyzing the characteristics of education, it is found that higher vocational education is a kind of cross-border education that straddles the boundary between campus and enterprises, and its talent cultivation should not only follow the law of education and cognition, but also conform to the law of career

development and growth. Apart from in-campus teaching, the teaching practice is also carried out beyond the campus. Therefore, as a blueprint for the implementation of talent training, the professional teaching plan not only needs to incorporate these characteristics, differences and laws when formulating it, but also must be guaranteed when implemented. However, the management in reality reveals that the existing professional teaching plan is still far from these requirements and the actual implementation is not in place, which has seriously affected the overall improvement of talent training quality. Although some colleges and universities have aroused vigilance and paid attention to it, few substantive improvement measures have been taken. Therefore, the author conducts a special research to solve the problem from the aspects of formulation and implementation, aiming to improve the feasibility and implementation effect of professional teaching plan in higher vocational colleges.

## **2. Realistic Limitations Reduces the Overall Completeness of Professional Teaching Plan**

Although the establishment of higher vocational colleges is later than that of ordinary colleges and secondary vocational schools, the higher vocational colleges' teaching field involved is broader and teaching time-space dimensions bigger, the actual exploration period is shorter, and the team is younger. Whereas there is no professional standard at the national level, colleges and universities are more likely to explore on their own, which in turn affects the pattern of overall control of professional teaching.

### **2.1. Lack of High-level Talents Reduces the Overall Control of Professional Teaching Plan**

The blooming of higher vocational education coincides with the heyday of higher education and the innovation wave of industrial development in China, which intensifies the demand for high-end talents. Based on social cognition and realistic conditions, more talents in the education field are more yearning for ordinary universities. Even introduced from ordinary universities and enterprises, it also requires a process to adapt to a new type of education. It is also necessary to create a platform and a process of self-improvement to cultivate the best teachers from the existing ones, which makes it difficult to attract and cultivate top talents in a certain period of the development of higher vocational education. In the face of the difficulties, each college and university takes the initiative to train some excellent teachers selected from the existing team, which is enough to ensure the work to be carried out as scheduled, although there is a gap between the true effect and ideal expectation. Due to the selection of the better rather than the best, gaps appear in the specific formulation of professional teaching plan, such as difficulties in overlooking the entire process of talent training from the overall height of professional development; effectively controlling the process and law of talent cultivation, fully exploring internal resources and effectively integrating them with external resources. In case that the selected teachers are not very responsible, sometimes there may be phenomena such as simple patchwork of curriculum settings, overlapping of curriculum content, "misplacement" or "absence" of prerequisite courses and subsequent courses, and opening courses based on the teaching ability of existing teachers.

## **2.2. Lack of Preliminary Research Reduces the Positioning Accuracy of Professional Talent Training**

The special preliminary research of the professional teaching plan is the analytical basis of the whole formulation process, but the existing research is generally at a more basic level and the more in-depth systematic investigations are rarely carried out. Firstly, there may be a lack of systematic analysis of the national policy orientation and regional development trend, or the research of enterprises fails to make requirements on sampling representativeness and universality. What's more, there are flaws in the design of some research programs or researchers have not been able to really penetrate into enterprises, so that finally it is difficult to make the most accurate positioning of the talent training market and technology development trend due to the lack of information [2]; Secondly, the current research generally focuses on demand side of talents market while ignoring the exploration of the characteristics of young generation's employment intentions in the new era. The set of preferred positions, relocation positions and development positions dose not really take into account the students' future employment intentions [3]; Thirdly, there is a general lack of awareness of the overall mining of big data, and failure to effectively use graduate tracking survey information review the scientific and rational nature of the professional teaching plan. Even some colleges and universities in terms of target positioning, talent specifications and curriculum setting do not match the needs of enterprises and the students' employment intentions in the long term [4]; Fourthly, they may have no idea on the availability of teachers and training places on campus and the expandable resources outside the campus, which makes it difficult to make an accurate estimate of the existing stock of resources, the potential to be exploited and the expected development, leading to over- or under-resourcing in the implementation process.

## **2.3. Fragmented Systems Weaken the Influence of Management**

The current formulation of professional teaching plan only has "principle guidelines", with no rules and regulations for effective control, often resulting in the management process in vain. The first is that the full-time managers are not given the responsibility of interpreting the connotation and guiding the process, thus weakening the connotation management into program management and losing the professional responsibility that should be a management expert [5]. The second is the lack of the necessary monitoring of the preliminary research, system construction and other key aspects, which makes it difficult to investigate the research process and content in detail, and judge the scientific and reasonable construction of the curriculum (link) system accurately [6]. The third is that the approval process is generally mere formality. The teaching department rarely conducts thematic demonstrations, and the colleges ignore the necessary verification links. It basically stays at the cognitive level of the professional person in charge, and absorbs scattered suggestions from some department leaders at most. The fourth is that many colleges have not yet established the accountability system for the quality of professional teaching plan formulation. At the same time, they lack the modern management awareness of big data. Some programs only conform to the standard format or they are finished by only attaching basic materials.

### **3. Lack of Management Reduces the Overall Effectiveness of Professional Teaching Plan**

Teaching implementation is the process of actualizing the professional teaching plan into specific teaching actions. The final effect is not only related to the actual delivery of the course (link), but also affected by the effect of the course. If there is an absence of management, it will inevitably lead to a decline in the effectiveness of the implementation.

#### **3.1. Limited Implementation Conditions Reduce the Overall Implementation Effect of Professional Teaching Plan**

The implementation of professional teaching plan not only involves the allocation of resources, but also involves the reorganization of interests. Most of them will weigh the difficulty of implementation based on existing conditions, and avoid system constraints by exploring management blind spots when necessary. At the level of faculty, when there are insufficient teachers, "seemingly reasonable" reasons, such as the rapid development of science and technology, or lack of consideration due to the prevailing circumstances, are firstly cited to justify adjustments. The second is reducing the number of class hours per week, changing the classes suitable for small classes to large classes, assigning new teachers who have just joined the profession to hold concurrent teaching duties, or assigning practical training and internship instruction to teachers under the promise of teaching normality. The third is that the departments with contracted funds sometimes solve the shortage of teachers by hiring teachers with low professional titles. At the teaching material level, the frequency of professional teaching plan adjustment will directly affect the selection and subscription of teaching materials. If the frequency of adjustment is too high, it will also cause disorder in the selection of teaching materials. Sometimes due to time constraints, it will be forced to omit the textbook evaluation and approval process, which leaving opportunities for some teachers to use self-compiled teaching materials or materials based on the consideration of private social relations. At the facility level, colleges and universities generally increase investment in teaching equipment and facilities, but sometimes due to the lack of conceptual guidance during the specific construction process, it is still difficult to meet the needs of doing by learning, learning by doing, and learning by exploring [7], which only increases the average device numbers of students on campus. At the management level, some colleges ignore the professional characteristics of teaching affairs management in personnel employment. Sometimes they not only carry out substantial changes in personnel, but even transfer a large number of surplus front-line teachers, which leads to a relatively awkward management state and makes it difficult to control the implementation of professional teaching plan in an all-round way.

#### **3.2. Narrow Concept of Responsibility Invisibly Increases the Difficulty of Actual Implementation of Professional Teaching Plan**

The teaching implementation process requires multi-departmental collaboration, but it is easy to breed narrower departmental concepts in specific operations. For example, teaching is simply understood as the responsibilities of teaching affairs department, teaching department and teachers,

while the related students are considered to be the business of the student administration department, counselors and the head teacher, which separates the internal connection of things. As far as teaching is concerned, the HR department must first introduce the corresponding teachers and the logistics department builds the necessary equipment and facilities, so that the teaching affairs department can coordinate teaching tasks and teaching resources. The appointment of teachers, the subscription of teaching materials and daily management must also be carried out by teaching department, while the teaching of specific contents is realized by individual teachers. This process is inseparable from the library information department, which provides the necessary library materials and network resources for teaching and research, as well as the teaching monitoring department, which ensures the implementation of real-time tracking and dynamic early warning. As for the analysis of student sources and employment trends done by the admissions and employment department, it is of great reference for the improvement of subsequent professional teaching plan, but it is hidden in some invisible services. Take students as an example, the student management department, counselors, and head teachers are naturally the main force in student management, but teachers, as the executors of specific teaching, still shoulder great education responsibility-propagating doctrines under preaching and solving puzzles. It is extremely one-sided that teachers are only responsible for teaching specific content in the classroom and do not need to care about students' comprehensive quality.

### **3.3. Limited Access to Information Makes It Difficult to Improve Professional Teaching Plan**

At present, many higher vocational colleges and universities have not made effective use of the information on the implementation of professional teaching plan and have not tapped the potential value of professional teaching plan for re-examination and perfection, which leads to questions such as whether the objectives of professional training are definite, whether the specifications of talent training are clear, whether the graduation requirements are reasonable, whether the analysis of vocational demands is appropriate, whether the ability training and link settings are matched, whether the contents of general education, specialized courses and comprehensive practical courses are proper, and whether the component proportion of professional teaching plan is rational. Even though there are some thoughts about these questions, they are seldom deepened to management propositions to proceed research, such as how to conduct special preliminary research and graduate tracking survey in order to provide the most adequate materials for the formulation of professional teaching plan, how to integrate the setting of curriculum or link with vocational ability cultivation, personnel specification positioning and professional standards, how to integrate and optimize teaching resources inside and outside the classroom, inside and outside the campus, online and offline, and how to solve malpractices in the process of teaching professional plan formulation, and how to use teaching information to enhance the effectiveness of work coordination among departments [8]. The reason is that, in addition to not forming the professional habit of information utilization, managers are also relatively unfamiliar with the specific selection and operation of information tools. Coupled with the traditional management inertia, information utilization is still a practical shortcoming of teaching management in many higher vocational colleges.

#### **4. Innovate the Mode of Professional Teaching Plan in Full-process Management and Operation with Problem-oriented Viewpoint**

Higher vocational talent training involves many links, and the slight deletion of each link will produce quantitative accumulation and lead to qualitative changes. Therefore, management must be integrated into the whole process of professional teaching plan formulation and implementation, by raising the position, integrating resources, optimizing processes, implementing monitoring and other measures to effectively control each link.

##### **4.1. Raise Position and Improve Overall Control over Professional Teaching Plan**

The idea that talents are the primary resource should be always kept in mind. We should improve the overall talent structure by means of "training and attraction". The first is to establish an incentive mechanism for the training of high-end talents, especially to give policy inclination for studying abroad, academic seminars, and intercollegiate exchanges, to set moderate restrictions on the teaching workload, and to establish a corresponding performance appraisal system while increasing job allowance. The second is to deliver a credit system for continuing education of teachers, a new teacher-assisted training plan, and a special assistance system for teachers who are temporarily weak in teaching effectiveness, actively create out-of-home learning, special training, special seminars, school-based training, corporate training, teaching workshops and peers mutual assistance and other promotion carriers. The third is to establish a special work responsibility system for managers, identify their responsibilities such as policy interpretation and process guidance, and supervise the development of habits such as studying documents, mining data, and researching problems.

##### **4.2. Integrate Resources to Effectively Compensate for the Practical Shortcomings in the Implementation of Professional Teaching Plan**

The implementation of professional teaching plan cannot be guaranteed without the teaching resources such as human resources, teaching facilities and off-campus bases, therefore, the overall resources must be activated and optimized before the formulation of professional teaching plan. The first is to introduce the idea of professional cluster development, and to explore the path of maximizing and optimizing the use of teaching resources, so as to form a greater professional influence and an effective joint with society; the second is to face up to the common law and personality differences in the process of talent training, and cultivate students according to their existing foundation and development demands, and to establish a mechanism for cultivating talents with special skills accordingly; the third is to carry out the organic integration of the second, third, fourth classroom and the first classroom. Through establishing corresponding project selection "menu" [9], we can maximize the overall integration effect of inside and outside the classroom, internal and external campus, and online and offline; the fourth is to tap the teaching potential of the campus teachers through the "introduction and transfer" and other ways, open up the external boundaries between teaching units according to the principle of mutual consultation and sharing. In



addition, we should establish a pool of part-time teachers based on the principle of "not seeking everything, but seeking what you use", and attract experts from government, industry and enterprises, as well as corporate backbones to come to the campus for part-time teaching, thereby forming a relatively stable team of teachers with internal and external integration, and complementary advantages; the fifth is mutual consultation, construction and sharing of teaching resources on campus with seeing all department as a whole, and to build off-campus training bases with industry and enterprises, integrating "teacher training - student practice - serving enterprises" in one and realizing the sharing of multiple departments and school-enterprise linkage [10]; the sixth is to work out a normalized diagnosis and reform mechanism based on the internal teaching quality assurance system framework, and then further develop the system, norms and standards [11], effectively improve the degree of collaboration between departments, the awareness of employee participation, and the effectiveness of work promotion.

#### **4.3. Optimize the Process and Try to Improve the Overall Implementation Quality of Professional Teaching Plan**

The professional teaching plan is an execution offer jointly reached by colleges and students, and must be guaranteed by standardized procedures and complete processes. In the formulation phase, the first is to perfect the job responsibilities and clarify the responsibilities of teaching affairs management specialists not only for standard interpretation, but also for process guidance; the second is to improve the standards for formulating professional teaching plan, clarify the respective responsibilities of departments, majors, and teachers, establish rules for process arrangement and quality assessment, carry out special sampling inspection system such as special investigation and system construction etc.; the third is to refine the formulation process of professional teaching plan, adopting operational rules based on special preliminary research, the positioning of talent training, the analysis of vocational aspirations, the construction of the curriculum system and the arrangement of teaching processes etc. (as shown in Fig.1); the fourth is to optimize the approval process of the professional teaching plan by setting up the special seminar of the teaching and research office, organizing the special demonstration of the department, and making special review, so that the professional teaching plan can be improved through the hierarchical verification of feasibility, rationality and compliance. When it comes to implementation phase, the first is to establish an open and transparent system for professional teaching plan adjustment and approval, and foster an atmosphere of strict self-discipline through public consultation with teachers and students, upward movement of approval authority and accountability; the second is to standardize the rules and regulations for the selection, ordering, procurement, supply and distribution of teaching materials, as well as the system for evaluating teaching materials, limit the service life of textbooks, encourage teachers to develop school-based textbooks and special teaching materials, especially project-based practical training and internship textbooks; the third is that the quality assurance system for new courses must be strengthened, and all teachers who open new courses must pass a trial run, while at the same time implementing a system of maximum teaching load for

teachers; the fourth is that an approval system and a dynamic adjustment mechanism for the use of practical training resources must be put in place, with an emphasis on ensuring the teaching of integration courses of theory and practice and eliminating the phenomenon of one single course occupying all resources and the computer room being used only for display functions; the fifth is to introduce a special seminar system for professional teaching plan, and foster problem awareness, peer mutual assistance and self-reflection habits through experience sharing and problem inquiry.

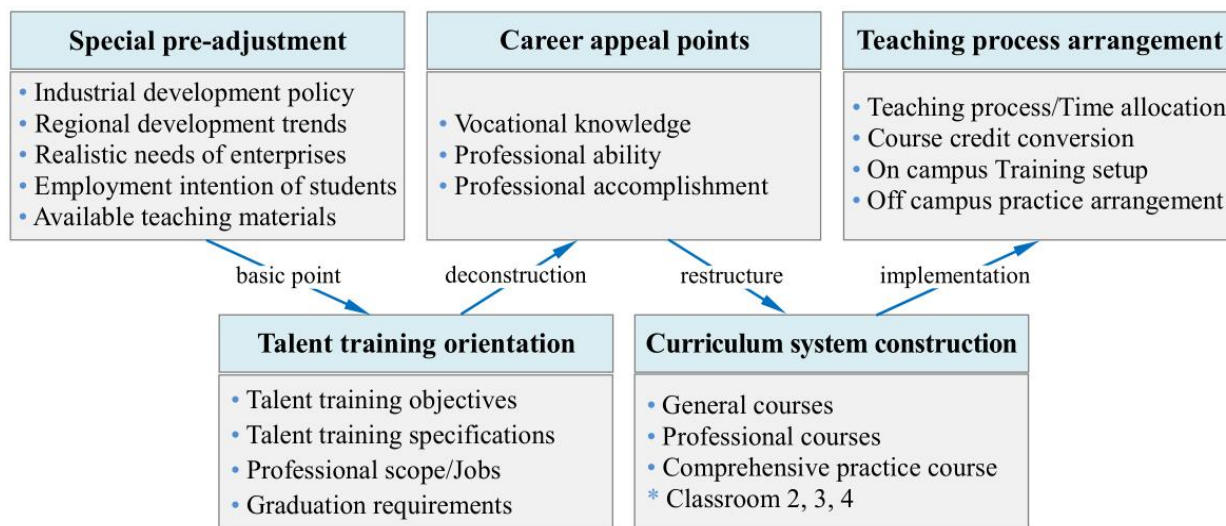


Fig.1 Professional teaching plan making process

#### 4.4. Implement Monitoring and Control to Ensure the Process Quality of Professional Teaching Plan

There are many controllable and uncontrollable factors in the formulation and implementation of professional teaching plan. Dynamic monitoring is the most direct and effective way to ensure the quality of the process. The first is the development of a sampling inspection system for the quality of professional teaching plan, with the focus on preliminary research, target orientation, talent specifications and the curriculum system, in an effort to control process quality from the initial stage; the second is the construction of a sampling inspection system for the implementation of professional teaching plan and an information notification system, with the focus on the implementation rate of plan, the teaching load of teachers, the rationality of the choice of teaching materials and utilization rate of training facilities, in an attempt to improve implementation; the third is to establish a "dual track" inspection system consisting of supervision and evaluation of teaching affairs, and extend the coverage of inspections to the entire teaching process so as to build up a teaching ecology; the fourth is to establish an information-sharing mechanism, foster an atmosphere of professional self-discipline and a sense of inquiry into problems, and innovate collaboration mode; the fifth is to create a normalized diagnosis reform mechanism and quality improvement spiral (as shown in Fig.2 ), to ensure that the professional teaching plan is always in the cycle of improvement and correction [12], and to achieve higher quality through continuous



cyclic improvement; the sixth is to roll out a long-term incentive mechanism, incorporate the formulation and implementation effect of professional teaching plan into the performance evaluation of the department, and connect it with the allocation of professional construction funds and the position allowance of the professional leaders.

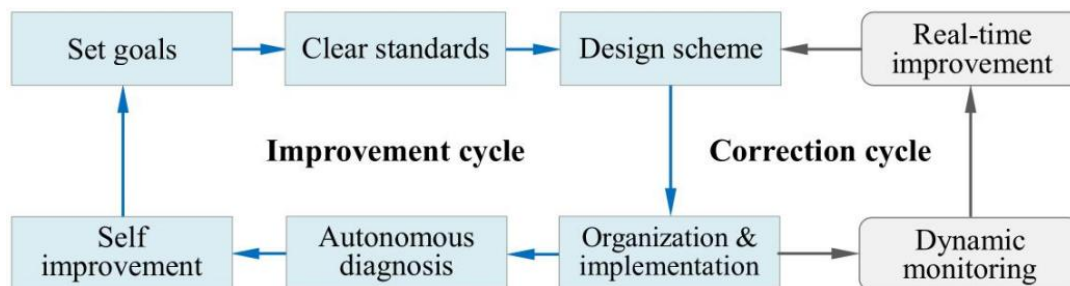


Fig.2 “Figure 8” quality improvement spiral

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