Construction of the training mode system of electric power skilled personnel in Tibetan areas

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Abstract—This paper analyzes the characteristics of the electric power personnel training mode in Tibet, and divides the system into five main subsystems: training support subsystem, training quality assurance subsystem, teaching and training subsystem, training management subsystem and training target subsystem. It defines and preliminarily divides the five subsystems and their subordinate elements Analysis.

1. Introduction
The power grid infrastructure in Tibet is weak and the management is lagging behind. The human resources of power supply enterprises in Tibet are seriously lacking. The talent structure is becoming more and more aging. Moreover, the level of professional ability of employees is insufficient. The service level is difficult to provide strong support for the economic and social development of the Tibetan area. The power development in Tibet is seriously hindered. In addition, there is a decoupling phenomenon between the school's training mode and the power enterprise's seeking. When the professional quality can't meet the actual needs of the power enterprises in the Tibetan area, and it needs a long time for the students to enter the enterprise after graduation. Schools attach importance to school enterprise cooperation, but the breadth and depth of school enterprise integration is not enough. To solve the difficult problem of the shortage of Power Talents in Tibetan areas, it is necessary to understand and analyze the basic characteristics of the talent training mode in Tibetan areas, analyze its constituent elements, links, conditions and conditions, and apply holism to understand the links, elements and surrounding environment of the power talent training mode in Tibetan areas, so as to achieve a systematic and comprehensive understanding of the mode research[1-4].

2. Analysis on the characteristics of talent training mode of electric power higher vocational education in Tibet
The talent training mode of electric power higher vocational education in Tibet should have the following characteristics: occupation orientation, professional demand orientation, equal emphasis on learning and practice, duality of teachers and diversity of training approaches.

2.1. Occupational orientation of electric power
As for career orientation, it should be reflected in all aspects of the power talent-training mode, and the setting of each link should fit the specific needs of the occupation. The goal of higher vocational education is different from that of ordinary higher education. The purpose of general electric power vocational education is to cultivate theoretical research-oriented and engineering research-oriented talents; while higher vocational education of electric power mainly aims to cultivate high-quality power technical and skilled talents who work in the production line of electric power enterprises and can directly apply theoretical knowledge to production and management and transform them into
productivity. It can be reflected in the professional posts, and has obvious vocational skills. Therefore, the higher vocational education personnel training mode's training goal is more prominent ability goal, pays attention to the vocational post ability training education. In the view of the special economic and social development of Tibetan areas, the training mode of electric power talents in Tibetan areas should highlight their professional orientation, so as to better serve the economic and social development of Tibetan areas.

2.2. Demand orientation of power specialty
As for the specialty demand orientation, higher vocational education is to transport high-quality technical and skilled talents for regional economic development, industries, industries and enterprises. Its specialty is set up based on professional posts or post groups, which is targeted and career oriented. The talents cultivated are to serve the regional economic development. In order to set up and adjust the specialty of electric power higher vocational education in Tibet, it is necessary to investigate the social industrial structure, employment structure and economic institutions in Tibetan area, analyze the scale and development prospect of electric power professional demand, take the demand of electric power talent market as the guidance, connect the electric power professional posts or post groups, highlight the specialty with characteristics and high technology content, and cultivate all kinds of professional technologies that meet the needs Application oriented talents. Therefore, the establishment of the power talents training mode in Tibet must be guided by the needs of the regional power specialty in Tibet to adapt to the coordinated development of the region.

2.3. Paying equal attention to learning and practicing
With the importance of learning and practicing, the "professionalism" of higher vocational education directly determines that the teaching contents and methods must be oriented by post requirements and highlight practical teaching links. The cultivation of electric power talents in Tibetan areas is to meet the requirements and standards of electric power enterprises in Tibetan areas, reasonably arrange practical teaching, make each link of electric power teaching closely contact with the actual situation of regional power production to improve students' practical ability, and.

2.4. Duality of teachers in electric power specialty
Due to the professionalism of the training objectives of higher vocational education, its teachers should not only have the basic quality of higher education teachers, but also have the corresponding production practice experience, as well as the teaching ability and practical ability. Therefore, the "double qualified" teachers are the key to improve the quality of teaching, and an important guarantee of the quality of personnel training.

2.5. Diversity of Cultivation Approaches
With strong innovation ability and high practical ability through diversified training channels, the cultivation of electric power talents in Tibetan areas should fully integrate the educational environment and resources of schools, electric power industry and electric power enterprises, combine the classroom education environment mainly imparting knowledge with the production environment focusing on improving practical ability, and cultivate technical application-oriented talents.

3. Construction of electric power talents training mode system in Tibet
At present, there is no generally accepted definition about the elements of talent training mode in domestic research centers. In this paper, based on a large number of existing research results, including Chinese academic journal papers, English academic journal papers, authoritative scholars' opinions and government documents, the system elements of Power Talents Training Mode in Tibetan areas are taken into account, and the objectivity of elements extraction are also considered.
Through induction, this paper divides the power talent training mode system into five subsystems, namely training support subsystem, training quality assurance subsystem, teaching and training subsystem, training management subsystem and training target subsystem.

3.1. Training target subsystem
In the power talent training mode system of Tibetan area, the training objective is the starting point and destination of training behavior, which refers to the norms and standards of knowledge, ability and quality that the training objects should achieve through a series of training behaviors under the guidance of school enterprise integration concept. The connotation of training objectives, the first problem is what kind of expectations training has, the second problem is what kind of standards to achieve, the former involves the concept of education, and the latter involves training specifications.

Educational idea is a problem of ideals, beliefs and values, including the guiding ideology of training behavior, the implementation principles, the requirements and judgments of teaching and management, etc., involving ideals and concepts. The training standard of higher vocational education is the requirement and standard of the knowledge, ability and quality of the training object. The relationship between them is as figure 2. The current training objectives of electric power major in a university are as

![Figure 1 The power personnel training system in Tibetan area](image-url)
### Table 1 Major and training objectives of Electric Power Vocational Colleges

| Major                                      | Training objectives                                                                                                                                                                                                                   |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| **Power plant and power system**           | Cultivates all-round development of morality, intelligence, physique, aesthetics and labor, master the necessary basic theory and professional knowledge of power plant and power system, have professional ability, and be engaged in the installation, commissioning, operation, maintenance and technical management of electrical equipment for power supply companies of state Grid Corporation of China and other power industry enterprises. |
| **Construction, operation and maintenance of high voltage transmission and distribution lines** | Cultivates high skilled talents with comprehensive development of morality, intelligence, physique, beauty and labor, good professional ethics, skilled professional skills, working attitude of keeping improving, basic ability of sustainable development, mastering necessary and sufficient professional knowledge, and engaging in construction, operation and maintenance of high voltage transmission and distribution lines for the first line of power production. |
| **Power system relay protection and automation technology** | Cultivate high-tech application-oriented professionals who have comprehensive development in morality, intelligence, physique, aesthetics and labor, master the basic theory and professional knowledge necessary for power system relay protection and automation, have post professional ability, and are engaged in the installation, operation, test and management of power plant and power system relay protection and automation devices. |
| **Power supply and consumption technology** | Cultivate the professional ability and skills to engage in the professional post, master the necessary basic knowledge and professional knowledge, have a strong ability to continue learning and innovation, have a good team spirit, establish the professional spirit of dedication and trustworthiness, strive for improvement, and develop high-quality technology in an all-round way in morality, intelligence, physique, beauty and labor. Capable professionals. |

(Source: according to the professional talent-training program of a university)

### Figure 2 The logic of training objective system

3.2. Training management subsystem

In this study, training management refers to the process of optimizing, integrating and allocating the resources within the talent training mode system consciously by the two main bodies of school and enterprise in order to achieve the training objectives. The contents and methods of training management are guided by training objectives, and the objects of training management are human, financial, material...
and information. The training management system package trains managers, objects, systems, institutions and behaviors. Among them, the cultivation of management personnel refers to the personnel who perform the management function and coordinate and organize all kinds of personnel to complete the training work together in the process of power talent training. Including the implementation of training management at all levels of personnel, such as education, industry steering committee leaders and staff, colleges and universities in charge of professional degree training management personnel. The object of management refers to the people or things to achieve the goal of management behavior, including human, financial, material and information. The management system refers to the code of conduct that all personnel in the system abide by during the implementation of management behavior. Administrative organization refers to the organization, unit or department that carries out management activities. Management behavior refers to the activity of training managers to perform management functions. According to their different functions, it can be divided into four types: planning, organizing, leading and controlling.

3.3. Teaching and training subsystem
The teachers of electric power skills training in Tibet refer to the teachers who are responsible for training and the teaching and training, scientific research and innovation team composed of these teachers. The quality of teachers, the employment of teachers, the composition of teachers and the training of teachers are introduced. The requirements for the construction of teachers in the training mode system of electric power skills in Tibetan areas are explained from four aspects of quality, quantity, structure and development.
The setting of curriculum system is divided into subject type and module type setting. The former emphasizes the logic and systematicness of the discipline and is suitable for academic training; the latter is flexible and can be composed of several curriculum modules that meet the needs of the power industry.

3.4 Training quality assurance system
The quality assurance system of electric power talents training mode in Tibet includes four elements: quality awareness, quality standard, quality evaluation and quality improvement. The cultivation of quality awareness determines the training quality standard, and the training quality standard is the basis for training quality evaluation, and the results of training quality evaluation are also the basis for training quality improvement, and the effect of training quality improvement should be fed back to the cultivation quality awareness, so as to adjust the training quality standard and start a new evaluation process. Training quality evaluation plays a positive role in guiding and motivating the development of power talent training mode in Tibet.

3.5 Culture support system
- Training resource system: In this study, the training resource system refers to all kinds of material and non-material resources that need to be consumed in the process of training electric power talents in Tibet. The resource system is the basis for the existence and development of the subsystems and elements of the talent training mode system, including training funds, equipment, books and materials, teaching and training hardware and software. The cultivation of material resources is the basis for the production of non-material resources. The cultivation of non-material resources can also promote the accumulation of cultivation material resources, and the two promote each other.
• Culture subsystem: The cultural system of talent training mode in Tibetan areas can be divided into three subsystems: concept culture, material culture and system culture. There is a causal relationship among them.

4. Summary
This paper summarizes the training mode of electric power talents in Tibet, and concludes that the talent training mode of electric power higher vocational education in Tibet should have five characteristics: occupation orientation, professional demand orientation, equal emphasis on learning and practice, duality of teachers and diversity of training approaches. The system is divided into five subsystems: training support subsystem, training quality assurance subsystem, teaching and training subsystem, training management subsystem and training target subsystem. Among them, the teaching and training system includes teaching and training teacher system, teaching and training curriculum system, teaching and training teaching system and teaching and training discipline system; teaching and training support system includes resource system and cultural system.

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