

Research on the "The Dual University" Concept in Germany and the Reference Pattern for Applied University in China from Perspectives of Professional Development and Ability Training

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Abstract

In this paper, we conduct research on the "The dual university" concept in Germany and the reference pattern for applied university in China from perspectives of professional development and ability training. The German dual system of higher education, which has created a new way to cultivate advanced applied talents, is of great significance to promote the development transformation of the undergraduate colleges and universities. However, the current domestic study of German dual system of higher education is relatively fragmented, and that most limited to the vocational college. Vocational college seems to be a German dual system of higher education. In fact, in the field of the higher education in Germany, set up the dual system has become a trend of the university curriculum. This paper proposes innovatively the potential combination of the Chinese education system with the dual university concept.

Keywords: Dual University, Reference Pattern, Applied University, Ability Training.

Introduction

Applied university is a product of popularization of higher education, which is different from research and academic university, its concept is broad, it not only includes university of applied technology but also includes the university of applied science and technology, service-oriented university, service-oriented entrepreneurial university, teaching service university, etc. Application technology university and teaching service university are the universities that inherently have talents cultivation, scientific research and social service function. At the same time, they are different types of universities in the process of operation, their full play of functions can be generally summarized as the following sub-components [1-3].

- The main task of applied university is to carry out application study in order to promote teaching and teaching feedback, improve application technology talents training quality. Therefore, all aspects of the applied university should be linked and conducive to the education teaching activities.
- The ultimate goal of training applied talent is service to society and economy. It attaches great importance to applied talents training, the purpose of cultivating applied talents is for better serve, namely to cultivate applied talents as the main way to serve the society and economy.
- The main task of teaching service university is of the application research on the social services. Because of social service concept, promoting social service ability has always been the main tasks and important mission of teaching service university.

Compared with academic universities, higher vocational colleges have their own unique characteristics in school-running orientation, subject setting, teaching mode, teachers and students' academic quality.

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These characteristics should be fully respected and considered in applied university assessment. "Dual system" mode is the core of the most unique part of the German vocational education. The so-called "dual system" mode is a kind of education mode by the cooperation of the enterprises and vocational schools. The trainer as an apprentice in the business enterprise receives vocational skills and knowledge from relevant training, in order to better grasp the "how to do" problems; at the same time, the trainer as a student in vocational school accepts professional theory and common cultural knowledge related to the vocational education, to learn practical skills in operation of "why" question. In Germany, "Dual University" is a university of professional completion with particular emphasis on the system theory knowledge, paying equal attention to both theory and practice.

In this paper, we conduct research on the "The dual university" concept in the Germany and the reference pattern for applied university in our country from perspectives of professional development and ability training. In the later sub-parts, we will analyze in detail with discussion.

The Proposed Methodology

The Professional Development Principles. The process of career development and individual success depend on the career maturity under the particular stage of development, namely the individual control with career development stage, on this basis to make its own suitable degree for the career decision-making. As we know, the technical and vocational education in the modern sense is accompanied by the industrial revolution first produced in general industrialized countries. Technology and vocational education developed in the world scope, there are some important ideological root, especially the pragmatism, the comprehensive technical education and the influence of the mass education thought[4-5].

At the preparation stage college students can evaluate themselves correctly, and fit in the field of professional needs that targeted training internal professional skills. Relatively mature professional decisions are one of the important measures to respond effectively to the employment difficulty. Based on the theoretical analysis, we can organize the countermeasures into the following aspects.

- Developmental theories focus on the development of people in his life. And the problem of career decision-making through the personal life events and the choice of the development process along with the age growth become increasingly complex.
- Self-awareness is a fundamental element which works with the following factors: the development of the self-consciousness in physical growth and intellectual growth, in the work of observing others, co-workers, and environmental impact.
- Environmental conditions and events include the social factors, conditions of education and vocational skills, environment and different learning experience formed by the interaction of that skills, goal setting, values clarification, the options and career information access, etc.
- Social learning theory said career decision is a long-term course that life is not just happened at a certain stage in one's lives, is made from birth to retirement and needs continuous various events and skills. Thus career decision skills teaching must be put forward in education and career counseling .

The Ability Training in Colleges and Universities. The implementation of quality education is the innovation of ideological concept of higher education. More important, quality education is neither the opposite of the "exam-oriented education" nor the opposite of "knowledge and ability", and the supreme purpose of education is the cultivation of people's comprehensive quality. Quality-oriented education is the all-round development of a person[6-7].

The key to train high quality applied talents, is to change ideas, and strengthen practice, optimize teaching methods, update teaching contents. The reform of methods and content needs a new pattern, local colleges and universities in strengthening students' application ability training should not only focus on strengthening the professional basic knowledge, but also improving the practice ability and the innovation ability. Innovation education is training and education to the student innovative spirit and innovative ability and innovative quality. The use of scientific examination will promote the innovation education. We must reform the existing examination system that makes good students' innovative spirit, innovative ability and the cultivation of innovative quality according to the figure 1.

Abilities and Behavior

- Performance = Ability x Motivation
- Types of abilities
 - Mental, cognitive, or thinking abilities
 - Mechanical ability
 - Psychomotor abilities
 - Visual skills
 - Specific learned abilities (training, experience, or education)



Figure 1. The Perspectives of Professional Development and Ability Training.

Knowledge cannot be completely equal to the ability of adaptation, so under the condition of college students learning task, we should strive to develop some more practical application ability to satisfy the needs of the society. In a sense, the ability is more important than knowledge, students with reasonable knowledge structure and unified various ability to adapt to the needs of society can be in an impregnable position in the labor market. Local university students' application ability is comprehensive, including professional basis, skills, abilities, cultural quality, scientific literacy, psychological quality, professional knowledge, problem-solving ability, innovation ability. This involves the concept of local university students development localization, the local university undergraduate training scheme, guiding the teaching plan and updating teaching content and method, teaching management and evaluation, the management of the students and the cultivation and optimization of teachers, which is a system engineering.

"The dual university" Principles. German dual system of vocational education for its most prominent reflects the German vocational education thoughts, ideas, system and basic operation characteristics, and "dual system" has become almost synonymous with the German vocational education. The German dual system of vocational education is based on professional classification of German social profession. [8].

In the German education system, vocational education mainly include three parts: one is the world-famous on-the-job training with the combined school education, mainly in manufacturing field; The second is full-time school vocational education accompanied with short period of internship, mainly in the health and social services; The third is a transitional system, students through the subsequent training can enter higher education study. German dual system of vocational education targets vocational abilities as the center, which includes the following three aspects:

- Social ability, which is engaged in the professional activities needed to communicate with the others, the ability of cooperation and collective work and life, including the consciousness of professional ethics, behavior and social responsibility, etc.
- Professional ability, namely the skills it takes to get engaged in occupational activities and its corresponding knowledge.
- Method, which refers to work and study methods needed in the professional activities, including the ability to plan, problem solving skills, ability to learn new technology and the ability of work evaluation.

"Double subject" school-running mechanism can make the above three sides join to meet the demands of enterprises according to the talent training scheme of enterprise development strategy. Students learn theoretical knowledge and technical skills to keep pace with the times. A mechanism can be established for students to choose instructor and trainer, to improve experimental condition, evaluation standards, quality control, to ensure quality of talent cultivation.

The Application-Oriented University. The concept of "applied university" is the result of from "applied talents" to "applied education" to the "applied university" process. "Applied talents" and "applied education" concept is the precondition for the concept of "applied university", and is the basis of "applied university", but the "applicable talents" and "applied education" concept does not directly lead to the concept of "applied university", which means "applied talents" and "applied education" is the necessary condition of "applied university" rather than a sufficient condition.

Applied university is a new classification after the existing classification of institutions of higher education. It is based on the talent training type and level and changed the way of our previous classification, positioning to a higher level of applied technique talents. This new way of classification of the type and level of talent training differentiate the higher education in China into three categories: academic university, applied university and higher vocational colleges.

Aiming at the existing problem of applied university students and the causes of the problem, quality education must be carried out for students. Quality education is the self-management in daily work and study, combining students' physical and mental development while we should consider the following techniques. (1) Quality education must pay attention to education. Schools, society and family influence play roles on formation of values and outlook on life. College is a very important place of formation of the values and outlook on life. (2) Strict student management is the guarantee of quality education. Establishment and improvement of various rules and regulations to strengthen management, is an important guarantee of the quality education of college students. (3) The quality education should pay attention to students as the backbone and guide. College students' good quality, and ultimately depends on college students' consciousness and self-discipline, to give full play to students' self-education and self-service.

The University Education Development. Like all systems, university education system is formed by different elements according to certain structure and has a certain function of aggregate. Itself includes many subsystem, and also belongs to a larger system. In terms of its internal composition, university education training objectives, major setting and layout, curriculum, teaching materials and teaching methods, teachers, students and administrators, teaching, scientific research and social service, education decision and management, to name a few, these are the subsystem of university education system. These subordinate systems not only directly belongs to the education system, but also belong to the more than the larger social system.

The biggest difference between higher education and other levels of education is to teach profound knowledge through courses to students, so college course setting is the core of the undergraduate teaching. Under the new situation, the role and function of teachers' professional education should be re-considered and re-positioned by normal universities and school of education of comprehensive universities today. This is not only related to the education college's own survival, but also related to the development of specialization of teacher education. In the era of knowledge economy, the level of a country's national quality, the level of knowledge, with the number of people, will be the key factors deciding a country or a nation's status in the international competition. Under this basis, the development of the university education will be important and essential.

Conclusion

In this paper, we conducted research on "The dual university" concept in Germany and the reference pattern for applied university in our country from perspectives of professional development and ability training. Under this basis, this paper proposes new perspectives on the corresponding issues of the professional development principles, the ability training in colleges and universities, "The dual university" principles, the application-oriented university, and the university education development, and these are expected to be meaningful and helpful to the development of our applied university.

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