

“One Body Two Wings”-Innovation Research on Training Applied Talents

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Abstract. Training applied talents is the only way to achieve popularization of higher education. As the employment information asymmetry appears between social demands and higher school, the structure unemployment of gradulators is growing, and the phenomenon of “graduation is unemployment” is increasingly serious. For meeting the needs of community, many ordinary universities transform to Applied Technology University, and explore the mode of training applied talents who have own school features. This research proposed mode of training applied talents called “One Body Two Wings”, which provide reference for creating new mode of training applied talents.

Introduction

From the beginning of the 21st century, China's higher education is transforming from elitism to popularization. Since 1998, the scale of our country's higher education has kept growing rapidly, colleges and universities increased by 624.04% by 2013, the gross enrollment rate of school-age youth also jumped from 9.8% in 1998 to 37.5% in 2014, higher education in China has entered the popularization stage. It is not just the quantitative change, more importantly; it is a qualitative change, which will necessarily require the diversified development of our higher education. "Decision of the State Council on Accelerating the Development of Modern Vocational Education" indicates that "we should guide a number of regular undergraduate institutes to transform to applied technology ones." Such applied technology colleges and universities has become a category among others, and constitutes our higher education system along with comprehensive and research-based universities, taking up the task of training applied talents.

The Connotation and Features of Applied Talents Training Mode

Definition of Talents Training Mode. In "On University Education Environment" Mingjun Liu for the first time defines the talents training mode as "education and teaching style chosen or conceived under certain running conditions to achieve certain educational goals." [1]. Ministry of Education has given an official elaboration of talents training mode in "Views on Deepening the Reform of Education and Cultivating High-Quality Personnel Needed in the 21st Century " in 1998: "talents training mode is the way schools choose for students to build knowledge, ability, quality structure and the way to achieve such a structure, which defines the characteristics of talents fundamentally and embodies the ideas and concepts of education " [2]. Therefore, "how to teach", "what to teach" is the essential and core expression of talents training mode, and to the universities, mainly composed of elements of education goals, professional settings, curriculum system, teaching process, evaluation criteria and safeguards measures.

Connotation of Talents Training Mode. Applied talents refer to the professional personnel who can put their professional knowledge and skills into social practice, whose main task is transforming existing designs and drawings into products. Applied Talents are supposed to master practical knowledge mainly, rather than theoretical research or creating new knowledge, they are compound talents focused on competency, between academic ones and skillful ones. Applied talents training mode is a personnel training paradigm which aims at cultivating applied talents by the method of

practical teaching and focuses on learning for the practical usage. Its professional disciplines adapt to the needs of society while its curriculum structure is dominated by application, its teaching process takes both theory and practice into consideration, and takes competency as teaching evaluation.

Features of Applied Talents Training Mode

"Practice" Targeted. Applied talents training mode targets at cultivating students' practical ability to carry out major construction, design the corresponding curriculum and set clearly-directed profession training objectives. Students' practical ability is developed mainly in curriculum system, the proportion of practical courses should be increased and linked up with theoretic courses which emphasizes a combination of theory and practice. By the "sandwich" and other new curriculum design modes, students will be able to take theoretical knowledge to practice, look for problems in practice, then seek to theory to solve the problems, which will enable students understand the theoretical knowledge in depth as well as exercise their practical ability.

"Application" Focused. The core of applied talents training mode is cultivating students' applied ability of knowledge. Most people will equate "practice" and "application", but connotatively, the "practice" is only the completion of a simple movement of the work based solely on the existing mode of operation, while "application" emphasizes more on the ability of transforming theoretical knowledge to actual product rather than simply practical operation. Applied talents training mode aims at cultivating students' ability to transform their professional knowledge and practical skills mastered to application with which they will be competent to identify and solve potential problems in producing and management or a variety of first-line production. Students' application of their knowledge and ability to learn by analogy are the core content of applied talents training mode.

"Capacity" Oriented. More emphasis on polyability, application and advancing with times is put on applied talents. On the structure of capacity, the ability of identifying and solving problems is stressed, on the structure of quality, social adaptability and coexistence is emphasized. Because of the strong characters of polyability and advancing with times of applied talents, we should not only cultivate students' theoretical basis and practical application ability, but also need to develop students' ability of lifelong learning, so that students will master the self-learning methods and can identify and solve problems better according to the updating of times. At the same time, applied talents training mode is more focused on training students' innovative ability, comprehensive ability and pioneering spirit in the face of new topics, so that students' capabilities in all aspects will have been improved, and their integrated competence will be more accordant with the requirements of applied talents .

Basic Requirements of Applied Talents Training Mode

The essence and core of talents training mode is "how to teach" and "what to teach", which is the basic teaching paradigm of training a certain kind of talents, therefore, regular undergraduate institutes' applied talents training mode should also have a certain paradigm.

Education Goals. Bloom classifies educational goals into three specific goals: overall goals, educational goals and teaching goals. In applied talents training mode, educational goals are specifically professional training goals, professional basic requirements and curriculum goals [3]. As mentioned above, regular undergraduate institutes should take "advanced specialized applied talents" as the goal of professional training, however, for most schools there is not much difference between professional training goals and professional basic requirements, lacking of some certain personalities and features. To fully integrate "application" into professional construction, applied technology universities should establish different training objectives and requirements according to major characteristics and the needs of students. Curriculum objectives and requirements constitute an important part of the training program, and are also an important carrier of professional characteristics. Each course should explain course objectives and learning requirements from three aspects of "introducing, teaching, requiring", thus making training programs more complete and meticulous.

Professional Settings. Salient features of applied talents training mode are that professional settings dock with the needs of society, training objectives dock with the needs of the industry. Since the applied talents mainly serve in high-tech and other emerging industries, the professional setting should focus on professional flexibility and adaptability, and an active interest should be kept in related industries' changes, the relevant professional orientation should be adjusted flexibly as well, constructing majors required by industry according to times. Professional settings should be positioned from professional direction, so that professional direction modules could be adjusted flexibly according to market demand, allowing talents training to be more responsive to quickly updated social needs. Due to the compound and interdisciplinary characteristics of applied talents, professional orientation should pay more attention to the construction of inter-disciplinary majors, training applied talents who are distinct from other colleges' and universities'.

Curriculum System. Curriculum System of applied talents training mode should be established on the basis of the knowledge and competencies investigation and analysis on the industry, then teaching contents could be organized precisely and career planning direction could be made clearly. Curriculum system generally consists of basic courses (i.e. general education courses), professional basic courses, professional courses and practical innovative courses. To meet the market demand for applied talents training mode, professional courses and vocational training courses should be docked with each other, highlighting the practicality of knowledge granted. With the opening of market, advances of technologies and emerge of new things one after another, college students, an active-thought group, is the main group of innovation and entrepreneurship. Innovation and entrepreneurship courses can be integrated to train new applied talents of the 21st century. Since applied talents of undergraduates require a higher level of theoretical knowledge, curriculum system should focus on selection of general education courses and their proportion, condense theoretical courses, deepen and expand professional courses, emphasizing cohering theoretical and practical courses together and reflecting the application-oriented properties of the courses. Since the applied talents mainly dock with fast-growing high-tech industry, their course content should be set in consistent with the development of the industry with flexibility and timeliness characteristics. New technology, new methods of the industries' cutting-edge should be taught to students at the same time, which would allow them to adapt quickly to the requirements of the developing society.

Practicing Teaching. Practicing teaching is the most critical link in applied talents training mode, it is the requirement of training applied talents' core competence and career planning as well as the important means to develop students' practical ability and innovative spirit. In practicing teaching design, different majors should establish an independent or relatively independent practicing teaching system, practicing time, models and evaluation criteria should be designed according to the characteristics of the major. A complete practicing teaching system consists of curricular practice, extracurricular and school practice. In applied talents training mode, practicing teaching system should focus more on school-enterprise cooperation and combination of working and learning, emphasizing the unity of knowledge, mastery and practicability.

Evaluation Mechanism. Effective talents training mode relies on assessment and evaluation mechanism. A comprehensive talents training mode necessarily requires an element of evaluation mechanism for universities to evaluate students' academic achievement according to certain standard. Evaluation criteria should be based on talents training objectives, different majors should formulate evaluation mechanism suitable for students according to the majors' characteristics. Evaluation mechanism of applied talents training should involve understanding and mastering of theoretical knowledge and assessment of operational ability, emphasizing students' ability of understanding and applying knowledge they learnt.

Exploring of Building “One Body two Wings” Applied Talents Training Mode

The research explores to construct a high-level “One Body Two Wings” applied talents training mode which holds ideological & political quality, cultural & technical quality and physical & mental quality as “One Body”, practical ability and innovative spirit as “Two Wings” according to national and regional economic and social development.

"One Body" as the Backbone to Cultivate Comprehensive Quality. "One Body", as the basis of training talents, refers to cultivating fully developed talents of high comprehensive quality, paying full attention to the development of students' ideological & political qualities, cultural & skills qualities and physical fitness. The basic function of education is to fully realize human socialization, achieve human values and complete the integration of human character and social real character [4]. Reflected in the higher education, it is to train people's independent personality, cultivate students' ability to adapt to society. The applied higher institutes must take students' comprehensive humanistic qualities as the most important factor in talents training mode, laying a good ideological foundation to allow students to form healthy value orientations.

"Two Wings" as the Support to Train Applied Innovative Skills. "Two Wings" refers to the cultivation of students' practical applications and innovative abilities. It will support the overall development of higher thinking literacy students to help them better adapt to society and master basic skills to promote socio-economic development. Regular applied universities should develop "advanced specialized applied talents" to make them more suitable for rapid updating of knowledge of high-tech industries and help them develop the adaptability to industry updating and job changes. Since applied talents have compound characteristics, the training of undergraduate students should be more focused on training their comprehensive applied practicability and innovation ability, so that students will get a pair of "complete wings." The applied higher institutes ensure students to form "two wings" gradually from many aspects such as training programs, professional settings, curriculum system reform, teaching staff construction, practical application ability and innovative ability cultivating and so on.

Orientated in Social Demand to Optimize the Professional Structure and Foster Professional Characteristics. Professional settings should be flexible and timely, with professional structure together, should be adjusted in time according to the needs of society and industry development. And set up the major constructing philosophy of "constructing for industry, surrounding with industry and helping industry", insisting on establishing majors of "application, differentiation, clustering, specialization and high quality". Meanwhile, the applied higher institutes need pay real-time attention to social and local economic development and employment of graduates to flexibly control majors' "shutting up, stopping, merging and transforming" and increase or decrease the enrollment number of students.

Based on "One Body Two Wings" to Reform the Curriculum System . "Courses are an essential factor in achieving talents training, and are a basic guarantee to realize the objective of school education; curriculum construction is the basis and key of the major construction, it is the significant way to improve teaching quality [5]." Scientific curriculum system construction is the key point of the applied talents training mode, it is directly related to the quality of applied talents training. According to the "advanced applied technology talents training" target, the applied higher institutes must scientifically set up basic major course and professional course systems to construct a curriculum system focused on four modules including general education, professional education, vocational skills training and innovation ability training class.

Routed in Diversified Practice to Enrich Practicing Teaching. Practicing teaching is an effective way to consolidate and deepen theory knowledge and learn operating skills, it is the scientific platform to combine theory and practice as well as the key of applied talents training mode. According to students' ability, the applied higher institutes form regular teaching activities to build specialized practicing teaching system, which combines together course experiment, cognitive training, practice, course design and post practice, professional practice, enterprise post operation and technology development, graduation practice and graduation thesis (design), forming "three combination" students internship mode which includes professional cognition practice, production practice and graduation practice.

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