Exploration and Practice of Training Mode of Applied Innovative Talents

Hong-Liang WANG
Cisco Information School of Guang Dong University of Foreign Studies
13533618078@126.com

Keywords: applied innovative talents; training mode; discipline construction

Abstract: With the economic structural adjustment and industrial upgrading in China, the training of various applied innovative talents our society needs is a problem which contemporary universities should consider first. According to the connotations of the training objectives for applied innovative talents and major characteristics of the training mode for applied innovative talents and E-commerce major, this paper has conducted exploration and practice on the following four aspects: the innovation of international applied talents training system, the construction of innovative teaching team, the reform and innovation in teaching methods and the deepening of teaching management reform.

Introduction
Along with the progress of domestic science and technology and wide application of new technologies in different industries, the current economic structure adjustment and industrial upgrading have made a substantial increase of technological content in the production process in China, and requirements on the overall quality of the workforce and technical capability have increased day by day. At present, the number of disciplines of higher education in our country has been increased to a large scale and the shortage in talents supply has been eased, and the unbalance in talent structure has become the main contradiction in the talents cultivation. The training mode for applied innovative talents is not synchronized with curriculum system, teaching contents and the economic and social development. How to cultivate suitable talents according to local conditions, improve the employability of graduates, adapt to the adjustment of national economic structure and economic development needs and train various applied talents needed in the society is an urgent problem which should be taken into consideration in the university talents training.

Connotations of the Training Objectives for Applied Innovative Talents

Applied innovative talent is relative to special academic research-based talent. Academic research-based talents are those who seek for knowledge just for knowledge itself, go after truth and pursue precise, deep and special knowledge in the fields of their own majors to conduct critical thinking to the existing knowledge and verify the authenticity of the existing knowledge [1]; while applied talents are those whose purpose are only to solve practical problems, they propose problems in the process of utilizing knowledge, they should have wide or cross-disciplinary vision and pay attention to the utility of their knowledge with creative minds and comprehensive ability in the utilization of knowledge, but they may not master very profound theoretical knowledge.

Applied talents can be divided into two categories: one refers to “engineering” talents who are able to transform scientific principles into engineering designs, plans and operation decisions; the other one refers to technology-based or skilled talents who are engaged in intellectual and operational skills in the forefront line of production, able to the transform the designs, plans and decisions of “engineering” talents into material forms or something which plays a specific role in our society [1]. These two types of talents are different in the types, the breadth and depth of knowledge, and their training institutions also have different responsibilities, the latter ones are mainly cultivated by higher vocational colleges, based on mature technologies and standards, and the operational requirements in the mastering of occupational skills and technology, the training of
this type of talents is to cultivate strong technology reappearance ability of students who have solid professional skills. The applied innovative talent in this paper mainly refers to the former one.

From the perspective of knowledge structure, the training of applied innovative talents emphasize wide and professional knowledge and broad professional knowledge scope on the base of general knowledge, it not only emphasizes the integrality, systematicness and scientificity of knowledge system, but also pays attention to the construction of plastic knowledge framework for students and cultivate students’ abilities in technology innovation with their existing knowledge and the secondary development of technology; from the perspective of ability structure, it stresses students’ abilities to solve problems with modern science and technology, strong abilities in technology application and innovation, abilities to find and solve problems, awareness and abilities to deal with multidisciplinary issues and abilities for life-long learning[2]. Accordingly, the training mode of applied talents should pay more attention to the applicability of training objectives, integration of the cultivation process and the comprehensiveness of the knowledge. We have common misunderstandings in the relationship between general education and professional education for a very long time, we have paid much attention to cultivating talents in a single discipline, which has resulted in the single knowledge structure, narrow knowledge scope and poor adaptability in talents, and the training objectives do not focus on national and regional economic and market demands, employment situation and the adaptability after the employment.

Major Characteristics of the Training Mode for Applied Innovative Talents

Training Objectives Stressing Innovation Ability

Training objectives, going through the whole talents training process, is the concentrated reflection of the concrete requirements for talents training. The training of applied innovative talents should intake the improvement of students' innovation ability and innovation and entrepreneurship education into the curriculum, and penetrate throughout the whole process of University education. In the setting of training objectives, it should enable students to obtain comprehensive ability needed in their future career through education, especially the innovation spirit and innovation ability, thus to get good adaptability and flexibility in the rapid development of current society and economy. Therefore, the training of applied innovative talents for undergraduates must be based on general education to construct comprehensive ability and wide knowledge base for students, lay a foundation for the sustainable development of students; and it also must focus on ability training, so as to construct practical, innovative ability and entrepreneurial ability for students in the production, service, management and other aspects with knowledge and technology.

Curriculum System with Strong Applicability

“The training of applied innovative talents should regard ‘application’ as its objective, ‘innovation’ as characteristics." [2] In the setting of curriculum, we should pay attention to the learning of basic knowledge, strengthen the teaching of elementary courses and professional basic courses, prompt students to lay a solid and broad foundation with strong "stamina" which can be also called the ability of sustainable development. Based on this, we should emphasize applicability in curriculum setting and teaching process, highlight “the application of their knowledge” in the teaching of theories and practices, shorten the first theoretical class and extend the second practice class to establish a teaching system connecting the first class with the second one, make students apply what they have learned in the first class to the practice of the second class, and extending the contents of the first class to the second class, realizing the goal: “practice guiding, promoting and testing the theoretical teaching”. Curriculum setting should be application-oriented and market-oriented, and should be adjusted and optimized timely with the changes in market demands industrial structure, which not only can help students learn required and practical knowledge in a limited time and train their professional comprehensive ability and innovative ability, but also know the needs of the market in time to adapt to their jobs after graduation as soon as possible. And for colleges and universities, application-oriented curriculum has reduced the distance between the teaching and
demands from enterprises, which may contribute to the improvement of quality and pertinence of the training of undergraduate applied innovative talents.

Teaching Mode Centering on Experiments and Practice
To cultivate high-quality applied innovative undergraduates, practice teaching is a key part in the ability training and we must attach great important to it. So we need to establish campus comprehensive innovation practice bases and construct new teaching practice platforms for applied innovative talents. These platforms are not only important bases for cultivating students’ innovative thinking and ability, but also important places of teachers for teaching and scientific researches, students conduct a large amount of experiments and practice based on the comprehensive learning of professional theories and knowledge and put their theoretical knowledge into practice so as to discover and solve problems, which is really beneficial to cultivating their professional comprehensive ability and innovation ability. And solutions to questions proposed by students and results of their applied researches are likely to utilize in the practice of enterprises, this also can enhance students’ enthusiasm and innovation consciousness enormously and cultivate their creative thinking and ability.

Operable Omnibearing Cooperation between Universities and Enterprises
The cooperation between universities and enterprises goes through the whole process of the training of applied innovative talents and plays an important role in this process. In majors setting and the selection of curriculum contents, all training modes are distinctively enterprise-oriented. Universities will set flexible majors and curriculum contents according to actual situations of enterprises and adjust their curriculum system timely along with the developing trends of enterprises to avoid their teaching contents divorcing from demands of enterprises. In order to enhance the pertinence of talents training, enterprises will also participate in the formulation of teaching objectives and plans of universities. Enterprises will provide supports in all aspects of practical teaching for schools, provide places for teaching, send professional and technical personnel to guide students and evaluate students’ learning achievement together with schools. Teachers and students can really go out, which is not only beneficial to the implementation of teaching activities in schools and the training of high-quality applied innovative talents, but also solve the employment problem for students in a certain extent; and the cost of high-quality internship in enterprises is low and the results of scientific studies can be directly applied into the production of enterprises so as to promote the development of them. Therefore, in general, enterprises also actively cooperate with the teaching of universities and regard the cooperation with universities as an important aspect of their own development.

Exploration on the Training Mode of Applied Innovative Talents in the Major of E-Commerce
E-commerce is a cross applied major. After years of explorations, the major of E-commerce in Guangdong University of Foreign Studies has attached great importance to collaborative innovation, highlighted its characteristics of talents training:”international vision and excellent data analysis”, and conducted exploration and practice on the following four aspects: the innovation of international applied talents training system, the construction of innovative teaching team, reform and innovation in teaching methods, and the deepening of reform in teaching management according to objectives for the construction of the major of E-commerce.

Training System of International Applied Innovative Talents

**Strengthening the International Characteristics with “Three Joints”**
Under the environment of a new generation of information technology, E-commerce talents training should focus on the application ability of practical English and practical ability of international E-commerce, and insist on the combination between theory teaching and practice teaching, professional practice and society, and scientific and technological activities of students and scientific researches of teachers, to realize "three joints": the first one is jointing with Data Analyst
Certification System, mainly including the project data analyst certification organized by Data Analysis Professional Committee of China General Chamber of Commerce and project data analyst vocational and technical certification organized by Education and Examination Center of Ministry of Industry and Information, introducing core curriculum and philosophy of these certification systems into the major of E-commerce. The second one is jointing with curriculum systems and training modes of famous overseas universities, mainly including the reciprocal recognition of professional core courses, introduction of courses, and cooperative development and sharing of teaching resources. The third one is jointing with the best practice E-commerce, looking for benchmarking enterprises in the field of E-commerce, refining the characteristics and trends of talents demand and integrating the best practices of enterprises into the training system construction of E-commerce talents.

**Strengthening the Practical Training under the Environment of the New Generation of Information Technology**

**Innovating Practical Teaching Environment**

Under the environment of globalization, business in international procurement, international cargo transportation covers a wide range with complex business processes and operational steps and large operational risks, students have difficulties in finding places for field practice and internship. Based on the existing practical teaching conditions, we have set curriculums and teaching contents scientifically and formed a set of practical teaching systems within campus virtual environment based on the environment of information, the guidance of employment and the cultivation of abilities.

**Constructing International Practical Training Platform**

We have carried out third-classroom activities, made full use of national opening policies and international resources of our school, established international cooperation with overseas enterprises and institutions and found opportunities of interning in overseas enterprises and institutions for students. We have also explored relevant policies and regulations in practice, encouraged students to participate in overseas training activities relating to their future career during the period of schooling, and even allowed them to conduct full-time internship, which enables students to contact with actual international work and obtain relevant professional qualifications; at the same time, we have provided overseas training for students, set up overseas internship channels and encouraged students to practice in overseas enterprises, so as to cultivate international E-commerce talents with international education and training background.

**The Construction of Innovative Teaching Team**

At present, we have a large number of teachers for the major of E-commerce, apart from improving the quality of faculty through the introduction of talents, it is more important to improve the overall level of the existing faculties and construct a teaching team with “international awareness, abilities and quality”.

**Constructing Practical Teaching Team**

We will continue to make use of social forces to establish "a team for extracurricular part-time practical teachers", these practical teachers come from enterprise senior managers, E-commerce associations and institutions and government agencies. We will hire them to be our part-time tutors, or hire them to give special lectures, open up horizons of teachers and students. At the same time, we will send teachers to relevant enterprises for training and they may also help these enterprises develop projects.

**Improving the Team Operation Mechanism**

We will establish corresponding teaching team according to core professional courses, combine team construction with course construction and clarify the responsibilities of the team leader and team members in the teaching team. At the same time, we will organize teaching activities with
curriculum group as the basic teaching unit, constantly improve the construction of basic components of courses, carry out a variety of teaching and researching activities, listen to the opinions of all teachers and learn from each other, divide responsibilities within the team and cooperate with each, and strengthen the organizing, teaching and regulatory function of the curriculum group.

The Reform and Innovation of Teaching Methods

The innovation and exploration on effective teaching methods is an important breach in the implementation of the applied comprehensive reform in E-commerce.

Implementing the teaching mode of “one orientation, two joints and three stages” After years of practice, the training mode for applied innovative talents in the major of E-commerce in our school shall enter into the stage of refinement, that is gradually transiting from the original rough mode, in which students go to enterprises for internship, to the innovative refined mode which accords with the current situation of international E-commerce in Guangdong Province and the actual situations of enterprises and schools involving in international E-commerce business, in this mode, students will prepare in advance according to requirements from enterprises and then learn and research on their own fields. Enterprises expect graduates can work for them immediately after graduation and acquire maximum talents’ profit with minimum cost, which is bound to proposing new requirements on the teaching of professional courses. So we adopt the new teaching mode of “one orientation, two joints and three stages” to integrate the teaching process into the practice of posts. Through this, students can accumulate working experience gradually at school, and they will become proficient and popular talents among enterprises at the beginning of their career.

The Reform and Innovation of Teaching Methods

Establishing the Philosophy of International Teaching Management

Our school has continuously improved the service and support consciousness of teaching managers in teaching management and established the teacher-centered and student-centered philosophy through the learning of domestic and overseas outstanding teaching management practice and the promotion of overseas exchanging activities for teaching managers. At the same time, we guarantee the smooth implantation of all teaching activities. In addition, we also encourage teaching managers to learn new knowledge, accept new knowledge according to actual situations, improve their working efficiency and effectively carry out work about teaching service and support.

Compiling and Strictly Implementing Scientific and Reasonable Teaching Plans

In the teaching management, the school, college and department have strengthened the standardized management of teaching plans from two aspects: one is improving procedures and steps formulated in teaching plans; continuing to conduct investigation and demonstration on the formulation of teaching plans, and even conducting investigation and demonstration in a wider range, so as to ensure the teaching plans are scientific and reasonable. The other one is enhancing the scientificity and authority of teaching plans; insisting to object principles concerning curriculum and credits adjustment and credits and approve the adjustment of individual teaching period under special circumstances; and insisting principles that the adjustment of teaching plans should be approved and the implementation of new teaching plans cannot be retroacted.

Strengthening the Management of Teaching Processes

In the teaching management, teaching operation management is the core and most important management to teaching activities in teaching plans. It mainly includes: developing curriculum syllabus, the organization of classroom teaching programs, the organization and management of practical teaching programs, the organization and management of scientific researches and training, everyday teaching management, students status management, teachers management, teaching resources management and teaching archives management. By strengthening the standardization and informatization management of all steps in teaching management, we will make the procedures
of course adjustment management, teaching loads management, students’ status management and teaching resources management transparent through the information system and guarantee teaching activities go smoothly. In addition, we will establish and improve archives management system, clarify responsibilities of all staff and determine the contents, preserving scopes and durations of various teaching archives.

**Establishing and Improving Teaching Quality Management and Evaluation System**

We will continue to improve the system of “peers’ evaluation and students ‘evaluation” based on the system of classroom teaching quality evaluation, teaching supervision, student messenger. Here, our working focus is on the scientific setting of teaching quality management objectives, further highlighting internationalization and the innovation of talents training, we will establish corresponding quality standards according to objectives, collect teaching information through multiple channels, analyze the information and feed back in time and guarantee the smooth quality evaluation in the ideological and technical level.

**Perfecting Teaching Management System**

In the aspect of teaching management system, we will continue to build and perfect teaching plan revision and amendment system, the consultation deliberation system for experts working team, teaching supervising system, regular inspection system, student evaluation system, student achievement tracking analysis system, rewards and penalties system and supporting system for teaching and researching. In the aspect of "double-tutor system" and management practice, we require that each professional course shall be taught by our own teachers and teachers from other schools simultaneously.

**Conclusions**

The training mode of applied innovative talents for E-commerce of our school is still in the initial stage of exploration, we are also adjusting it timely according to the actual situation. We should firmly seize the current opportunity in the quality engineering construction of Guangdong Province, lean from other excellent universities and colleges in aspects of discipline construction and training modes according to the needs of social and economic development, launch interscholastic and international cooperation, attract outstanding teachers, establish excellent discipline team, combine the training of applied innovative talents with discipline construction, cultivate comprehensive applied innovative talents with solid basic and professional knowledge and excellent practical abilities, and construct the major of E-commerce to a distinctive discipline major and usher a new road for discipline construction.

**Reference**


